ORDER NO. MD9006024C2
A6

Service Manual

Radio Cassette

RX-DS660

Portable Stereo Component System

COMPACT
disc
DIGITAL AUDIO

DIGITAL

Color

(K)...Black Type

Area

Country Code	Area	Color
(E)	Continental Europe.	(K)
(EB)	Great Britain.	
(EG)	F.R. Germany & Italy.	

RX-FD55 MECHANISM SERIES (AR300)

■ SPECIFICATIONS

General:

Power Requirement:	AC; 220V 50Hz...(E, EG) 240V, 50Hz...(EB) Battery; 15V (10 UM-1, R20/LR20 batteries) Memory Back-up Battery for Computer; 6V (4 UM-3, R6/LR6 batteries) DC IN; 13.2V (⊖—◐—⊕)
Power Consumption:	45W (AC only)
Power Output:	30W × 2...PMPO. 15W × 2...MPO....(E)
Speakers:	2-Woofers; 16cm (2.7Ω) 2-Tweeters; 2cm
Input:	AUX; 200mV/47kΩ Mix. Mic; 5mV/600Ω (ϕ3.5) FM ANT; 75Ω
Output:	Speaker; 2.7~8Ω Headphones; 32Ω (ϕ3.5)
Dimensions (W × H × D):	702 × 229 × 218mm Main unit; 349 × 229 × 218mm Speaker box; 185 × 218 × 183mm
Weight:	7.1kg without batteries

CD Player Section:

Sampling Frequency:	44.1kHz
D-A Conversion:	16-bit linear
Beam Source:	Semiconductor laser (wavelength 780nm)
No. of Channels:	2 channels, stereo
Frequency Response:	20~20,000Hz (+0/−2dB)
S/N Ratio:	79dB (1kHz) Meaure point: speaker out
Wow and Flutter:	Unmeasurable

Radio Section:

Frequency Range:	FM; 87.5~108MHz LW; 146~288kHz MW; 522~1611kHz
Intermediate Frequency:	FM; 10.7MHz AM; 459kHz
Sensitivity:	FM; 1.8μV/50mW output (−3dB Limit Sens) LW; 180μV/m/50mW output MW; 140μV/m/50mW output

Tape Deck Section:

Frequency Response:	30~16,000Hz (with normal tape) 30~17,000Hz (with CrO$_2$ tape)
Tape Speed:	4.8cm/s (1-7/8 ips)
Track System:	4-track 2-channel, stereo
Recording System:	AC bias
Erasing System:	AC erase
Monitor System:	Variable sound monitor

Notes:
1. Weights and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

Panasonic

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

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■ SAFETY PRECAUTION (This "safety precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, sheilds, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

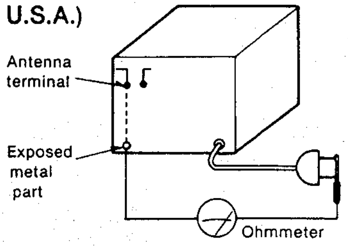


Fig. 1

Resistance = 3MΩ—5.2MΩ

• INSULATION RESISTANCE TEST

1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads, antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts*. (Fig. 1) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. 2)
   *Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.
4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

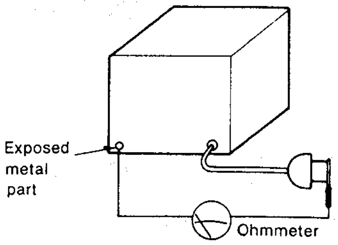


Fig. 2

Resistance = Approx ∞

■PRECAUTION OF LASER DIODE

CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

PRECAUTION OF LASER DIODE

CAUTION: This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick up lens.

Wave length: 780nm
Maximum output radiation power from pick up: 100μW/VDE

Laser radiation from the pick up lens is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laserd diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

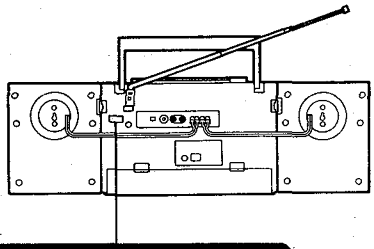
ACHTUNG: Dieses produkt enthält eine laserdiode. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

Wellenlänge: 780nm
Maximale strehlungsleistung der lasereinheit: 100μW/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdiode gefährlich ist.
2. Den werksseitig justierten einstellregler der lasereinreit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.

ADVARSEL: I dette a apparat anvendes laser.



CLASS 1
LASER PRODUCT
RQT4389ZAA

LUOKAN 1 LASERLAITE

DANGER-Invisible laser radiation when open and interlock defeated. AVOID DIRECT EXPOSURE TO BEAM.
RQLS0025

(Inside of product)

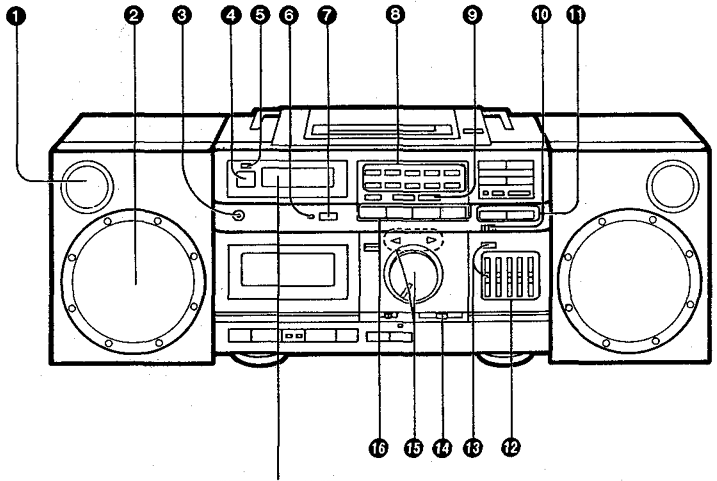
VORSICHT-Unsichtbare Laserstrahlung, wenn Abdeckung geöffnet und Sicherheitsverriegelung überbrückt. Nicht dem Strahl aussetzen.

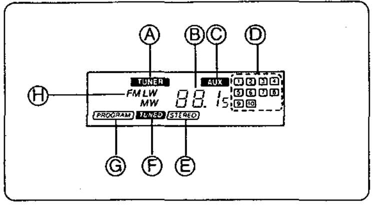
(Im Inneren des Gerätes)

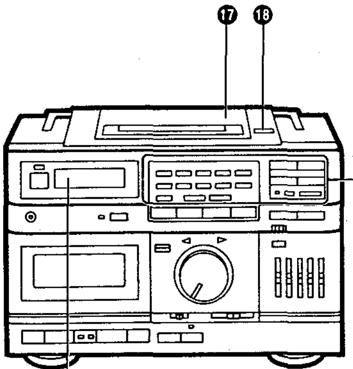
ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.

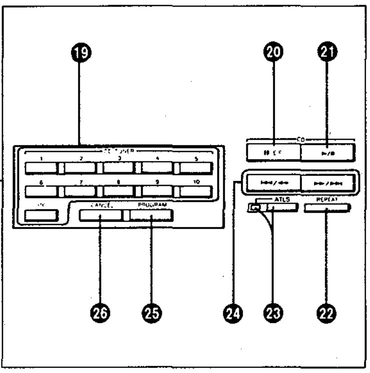
(Indersiden at apparatet)

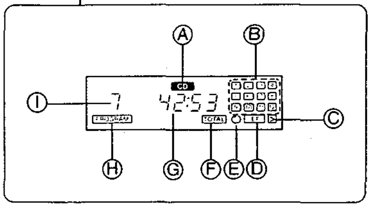
■ LOCATION OF CONTROLS











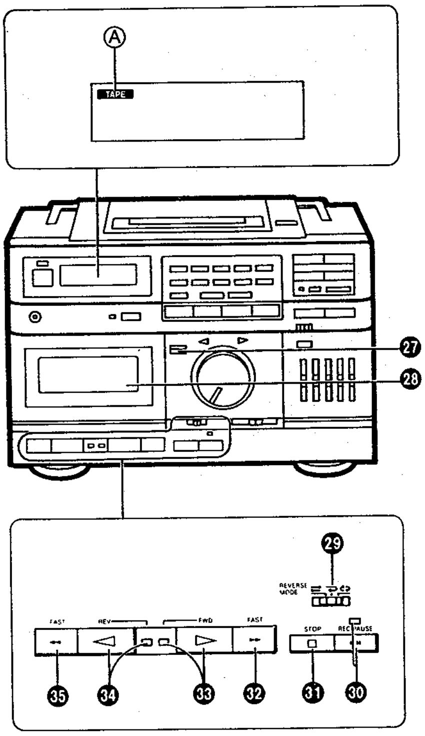
TUNER/GENERAL CONTROLS

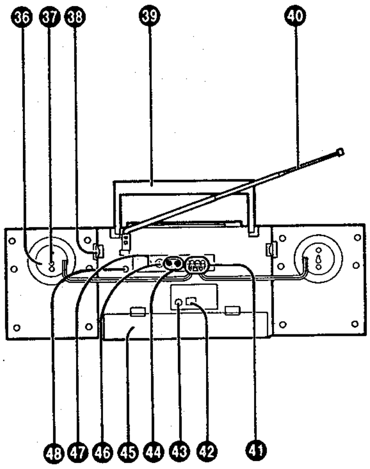
❶ Speakers [Tweeter]
❷ Speakers [Woofer]
❸ HeadphonesJack (PHONES)
❹ Remote Control Sensor
❺ AC Connection Indicator
❻ Operation/Battery Check Indicator (OPR/BATT)
❼ Operation Switch (OPERATION)
The operation can also be turned on pressing the Function Selector Button.
❽ Preset Tuning Buttons (1–10)
❾ Preset Memory Button (PROGRAM)
❿ FM Mode/Beat Proof Switch
(FM MODE/B.P: MONO/I, ST/II, ST/III)
⓫ Tuning Buttons (TUNING)
⓬ Graphic Equalizer Controls (GRAPHIC EQUALIZER)
⓭ XBS (Extra Bass System) Switch and Control (XBS: ON, OFF)
⓮ Balance Control (BALANCE)
⓯ Volume Control and Indicators (VOLUME)
⓰ Function Selector Buttons
(FUNCTION SELECTOR: TAPE, TUNER/BAND, CD, AUX)
"TUNER/BAND" Button can also be used for Band Selector.
Ⓐ Tuner Mode Indicator (TUNER)
Ⓑ Frequency Display
Ⓒ Auxiliary Mode Indicator (AUX)
Ⓓ Preset Tuning Indicator (1–10)
Ⓔ Stereo Indicator (STEREO)
Ⓕ Tuning Indicator (TUNED)
Ⓖ Preset Memory Indicator (PROGRAM)
Ⓗ Band Indicator (FM, LW, MW)

CD CONTROLS

⓱ Disc Holder
⓲ CD Eject Button (CD EJECT)
⓳ Numeric Buttons (1–10, +10)
⓴ Pause/Edit Pause Button (▮▮/E.P)
㉑ Play/Stop Button (▶/■)
㉒ Repeat Button (REPEAT)
㉓ ATLS (Auto Tape Level Settings) Button and Indicator (ATLS)
㉔ Skip/Search Buttons (⏮/◀◀・▶▶/⏭)
㉕ Program Button (PROGRAM)
㉖ Cancel Button (CANCEL)

Ⓐ CD Mode Indicator (CD)
Ⓑ Music Matrix (1–12)
Ⓒ Over Mark (▷)
Ⓓ Edit-pause Indicator (EP)
Ⓔ Repeat Indicator (↻)
Ⓕ Total Time Indicator (TOTAL)
Ⓖ Playing Time Display
Ⓗ Program Indicator (PROGRAM)
Ⓘ Track Display


Ⓐ
TAPE
㉗
㉘
㉙
REVERSE MODE
FAST
REV
FWD
FAST
STOP
REC PAUSE
㉟
㉞
㉝
㉜
㉛
㉚


㊱
㊲
㊳
㊴
㊵
㊽
㊼
㊻
㊺
㊹
㊸
㊷
㊶

DECK CONTROLS

- ㉗ **Eject Button (▲ EJECT)**
- ㉘ **Cassette Holder**
- ㉙ **Reverse Mode Select Switch (REVERSE MODE: ⇄, ⊃, ⊂⊃)**
- ㉚ **Rec-pause Button and Indicator (REC PAUSE)**
- ㉛ **Stop Button (STOP)**
- ㉜ **Fast Button (▶▶)**
- ㉝ **Forward-side Playback Button and Indicator (FWD)**
- ㉞ **Reverse-side Playback Button and Indicator (REV)**
- ㉟ **Fast Button (◀◀)**
- Ⓐ **Tape Mode Indicator (TAPE)**

REAR PANEL

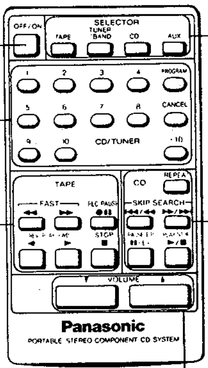
- ㊱ **Speaker Cable Compartments**
- ㊲ **Speaker Wall Mounts**
- ㊳ **Speaker Release Levers (RELEASE)**
- ㊴ **Handle**
- ㊵ **Telescopic Antenna**
- ㊶ **Speaker Terminals [SPEAKER (IMP 2.7–8Ω)]**
- ㊷ **AC Socket (AC IN ~)**
- ㊸ **DC Input Jack (DC IN 13.2V: ⊖—⊙—⊕)**
- ㊹ **Auxiliary Input Jack (AUX IN 200mV/1kΩ)**
- ㊺ **Battery Compartment**
- ㊻ **Mixing Microphone Jack (MIX MIC: 5mV/600Ω, φ3.5)**
- ㊼ **Microprocessor Beat Proof Switch (M.B.P.: I, II)**
- ㊽ **FM Antenna Terminal(FM ANT)...(E) Only**

Operation Switch

When using battery, it is not possible to turn on the unit with remote controller.

Functions Selector

"TUNER/BAND" key can also be used for Band Selector.


OFF/ON
SELECTOR
TAPE
TUNER BAND
CD
AUX
1
2
3
4
PROGRAM
5
6
7
8
CANCEL
9
10
CD/TUNER
+10
TAPE
FAST
REC PAUSE
STOP
CD
REPEAT
SKIP SEARCH
PAUSE/E.P.
PLAY/STOP
VOLUME
Panasonic
PORTABLE STEREO COMPONENT CD SYSTEM

CD/TUNER operations

1~10, +10:
CD: Numeric Buttons
Tuner: Preset Tuning Buttons
PROGRAM:
CD: Program Button
TUNER: Preset Memory Button
CANCEL:
Cancel Button (CD only)

CD operations

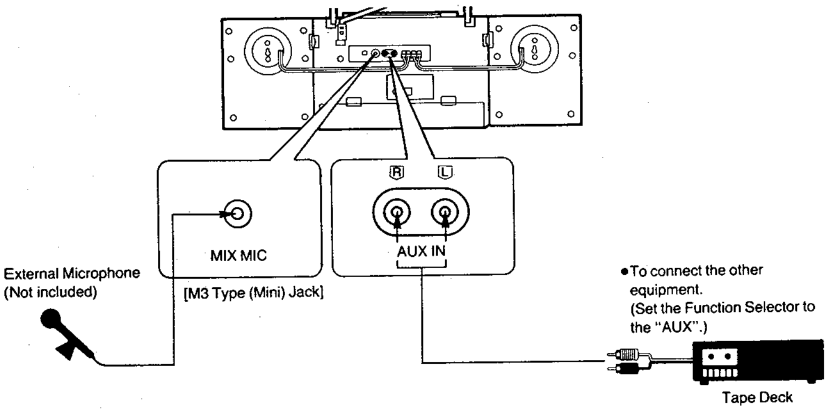
REPEAT:
Repeat Button
SKIP/SEARCH:
Skip/Search Buttons
PAUSE/E.P:
Pause/Edit-pause Button
PLAY/STOP:
Play/Stop Button

TAPE operations

PLAY-REV:
Reverse Playback Button
PLAY-FWD:
Forward Playback Button
FAST:
Fast Buttons
REC PAUSE:
Rec-Pause Button
STOP:
Stop Button

Volume Controls

■ CONNECTIONS


MIX MIC
R
L
AUX IN
External Microphone
(Not included)
[M3 Type (Mini) Jack]
Tape Deck

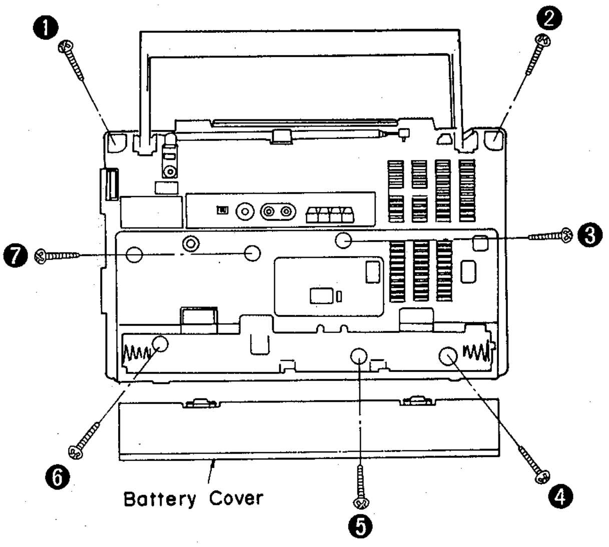
- To connect the other equipment.
(Set the Function Selector to the "AUX".)

DISASSEMBLY INSTRUCTIONS

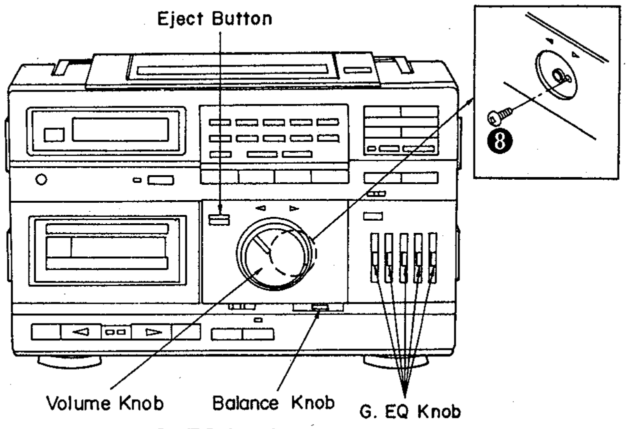
Warning: This product uses a laser diode. Refer to caution statements on page 2.

ACHTUNG:
- Die lasereinheit nicht zerlegen.
- Die lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

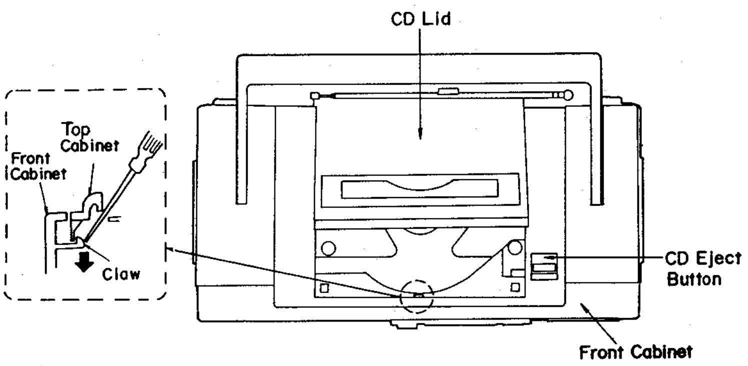
Ref. No. **1**	**Removal of the Front Cabinet**
Procedure **1**	


❶
❷
❼
❸
❻
Battery Cover
❺
❹

1. Remove the battery cover.
2. Remove the 7 screws (❶~❼).

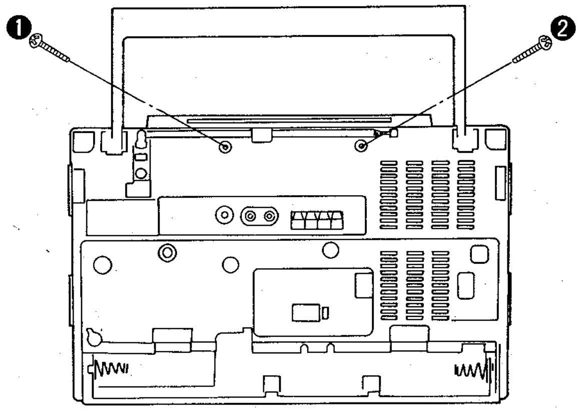

Eject Button
❽
Volume Knob
Balance Knob
G. EQ Knob

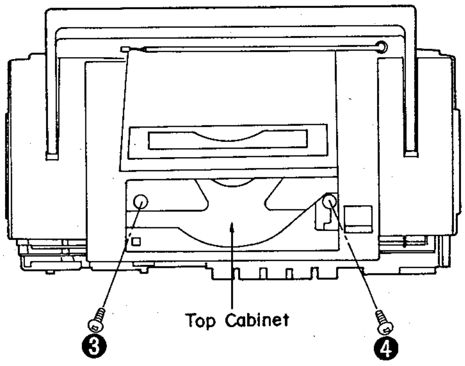
3. Remove the G. EQ knobs.
4. Remove the volume knob.
5. Remove the 1 screw (❽).
6. Remove the balance knob.
7. Push the eject button.


CD Lid
Top Cabinet
Front Cabinet
Claw
CD Eject Button
Front Cabinet

8. Push the CD eject button.
9. Push the claw, and then remove the front cabinet.

Ref. No. **2**	**Removal of the Top Cabinet**
Procedure **1→2**	



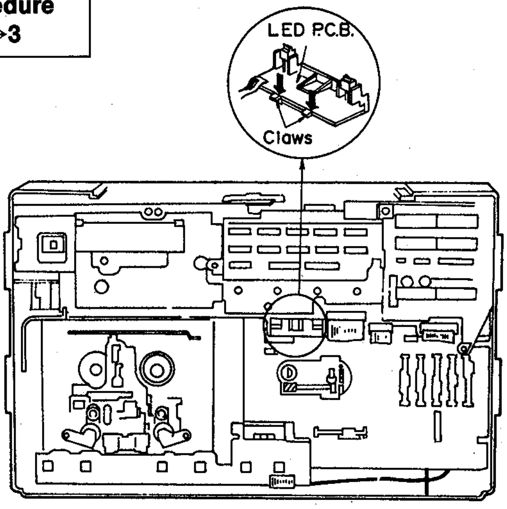

Top Cabinet
❸
❹

- Remove the 4 screws (❶~❹), and then remove the top cabinet.

Ref. No. 3

Removal of the LED P.C.B.

Procedure 1→3

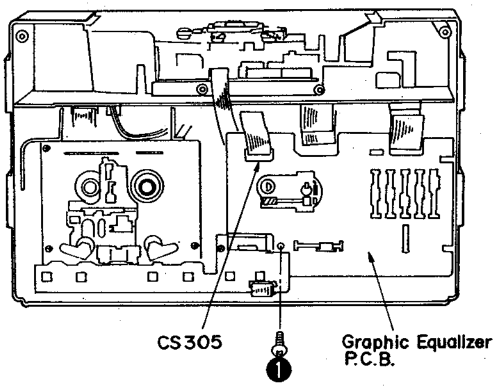

LED P.C.B.
Claws

- Release the 2 claws, and remove the LED P.C.B.

Ref. No. 5

Removal of the Graphic Equalizer P.C.B.

Procedure 1→2→3→4 →5

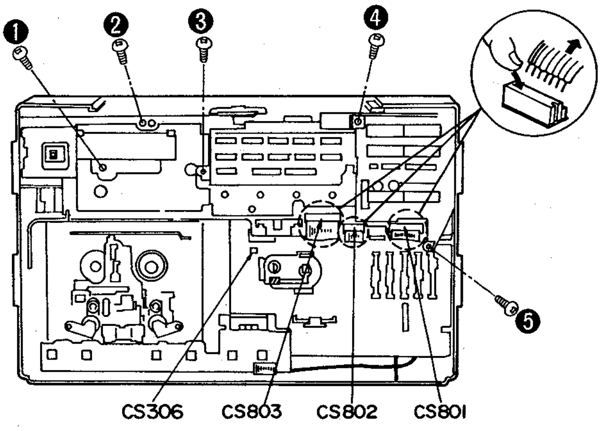

CS305
❶
Graphic Equalizer P.C.B.

1. Remove the 1 screw (❶).
2. Remove the 1 flat cable (CS305).

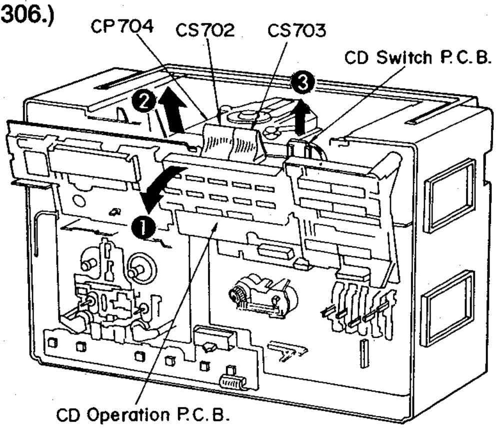
Ref. No. 4

Removal of the CD Operation P.C.B. and CD Switch P.C.B.

Procedure 1→2→3→4


❶
❷
❸
❹
❺
CS306
CS803
CS802
CS801

1. Remove the 5 screws (❶~❺).
2. Remove the 4 flat cables (CS801, CS802, CS803, CS306.)

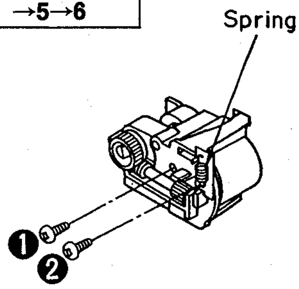

CP704
CS702
CS703
CD Switch P.C.B.
❷
❸
❶
CD Operation P.C.B.

3. Pull down the CD operation P.C.B. in the direction of arrow ❶ and then remove it in the direction of arrow ❷.
4. Pull out the switch P.C.B. in the direction of arrow ❸.
5. Remove the 2 flat cables (CS702, CS703).
6. Remove the 1 connector (CP704).

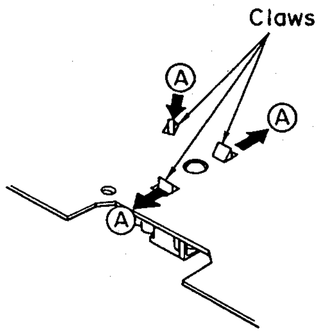
Ref. No. 6

Removal of the Gear Chassis Gear and Gear shaft

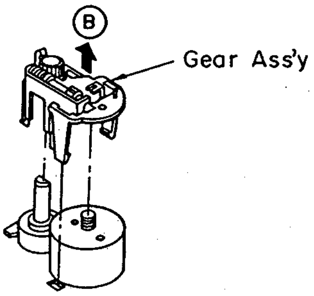
Procedure 1→2→3→4 →5→6



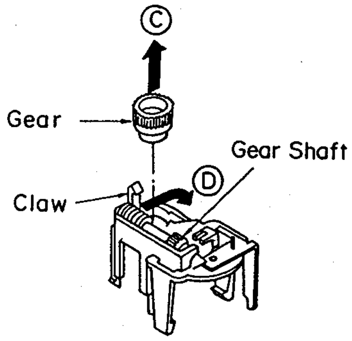
1. Remove the spring.
2. Remove the 2 screws (❶, ❷).



3. Release the 3 claws in the direction of the arrow Ⓐ.



4. Remove the gear ass'y in the direction of the arrow Ⓑ.

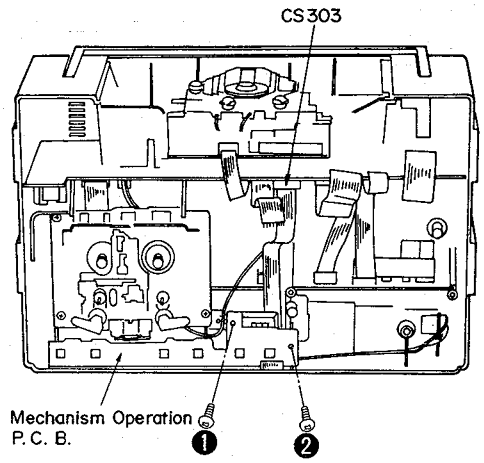

Ⓒ
Gear
Gear Shaft
Ⓓ
Claw

5. Release the 1 claw, and remove the gear in the direction of the arrow Ⓒ.
6. Remove the gear shaft in the direction of the arrow Ⓓ.

Ref. No.
7

Removal of the Mechanism Operation P.C.B.

Procedure
1→2→3→4 →5→7

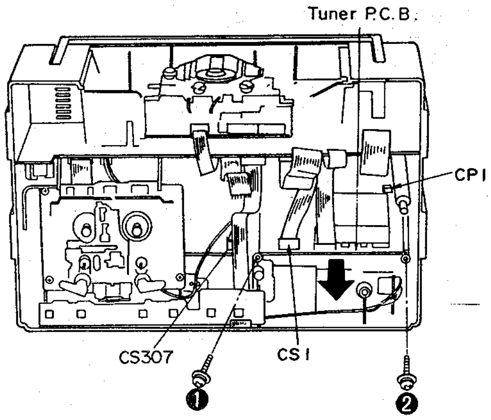

CS303
Mechanism Operation P.C.B.
❶
❷

1. Remove the 2 screws (❶, ❷).
2. Remove the 1 flat cable (CS303).

Ref. No.
8

Removal of the Tuner P.C.B.

Procedure
1→2→3→4 →5→8

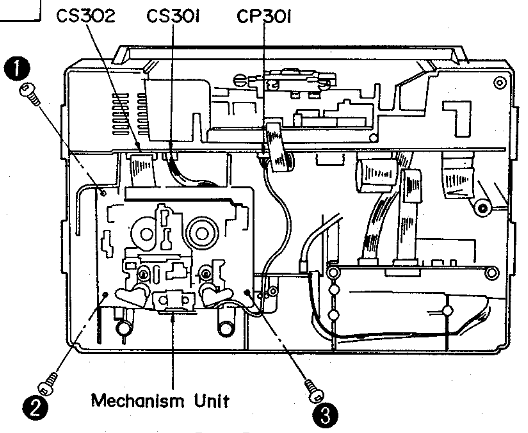

Tuner P.C.B.
CP1
CS307
CS1
❶
❷

1. Remove the 2 screws (❶, ❷).
2. Remove the 2 flat cable (CS1, CS307).
3. Pull out the tuner P.C.B.
4. Remove the 1 connector (CP1).

Ref. No.
9

Removal of the Mechanism Unit

Procedure
7→9

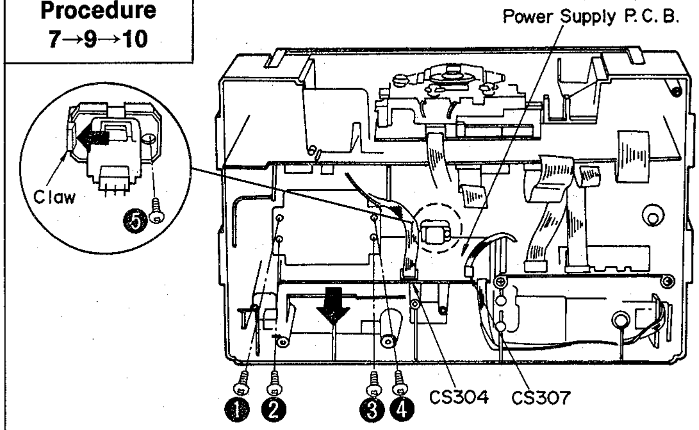

CS302
CS301
CP301
❶
❷
Mechanism Unit
❸

1. Remove the 3 screws (❶~❸).
2. Remove the 2 flat cables (CS301, CS302).
3. Remove the 1 connector (CP301).

Ref. No.
10

Removal of the Power Supply P.C.B.

Procedure
7→9→10

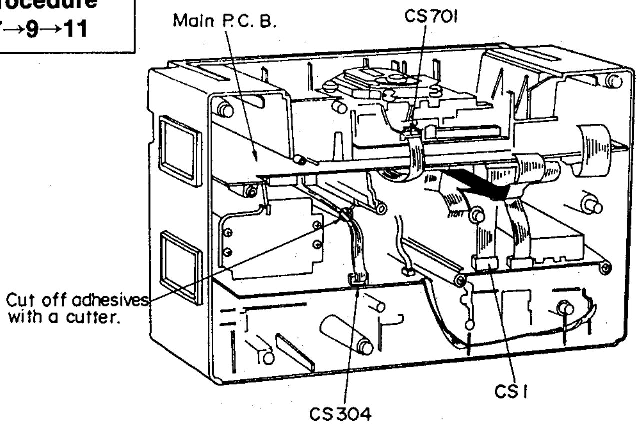

Power Supply P.C.B.
Claw
❺
❶
❷
❸
❹
CS304
CS307

1. Remove the 5 screws (❶~❺).
2. Remove the 2 flat cables (CS304, CS307).
3. Release the 1 claw.
4. Pull out the power supply P.C.B. in the direction of arrow.

Ref. No.
11

Removal of the Main P.C.B.

Procedure
7→9→11

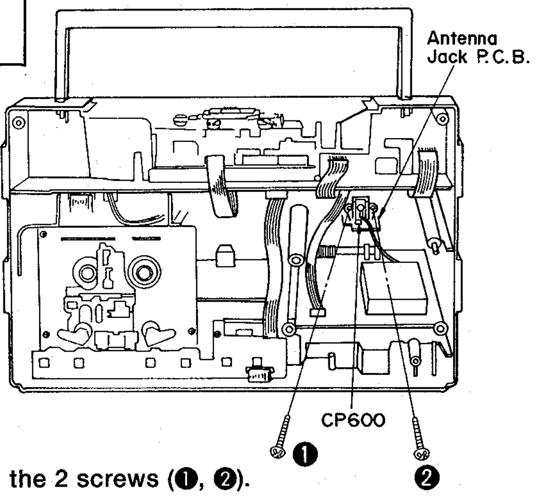

Main P.C.B.
CS701
Cut off adhesives with a cutter.
CS1
CS304

1. Remove the 3 flat cables (CS1, CS304, CS701).
2. Pull out the main P.C.B. in the direction of arrow.

Ref. No.
12

Removal of the Antenna Jack P.C.B.

Precedure
1→2→3→4 →5→12

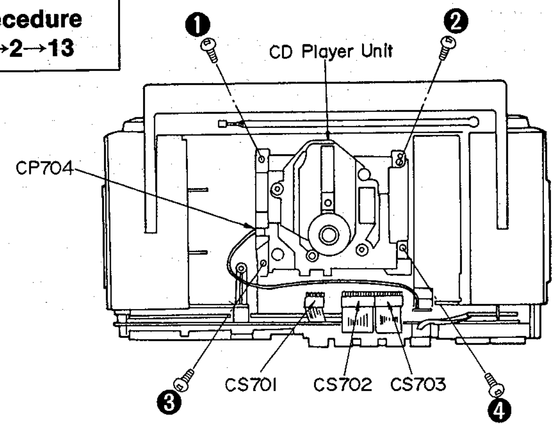

Antenna Jack P.C.B.
CP600
❶
❷

1. Remove the 2 screws (❶, ❷).
2. Remove the 1 connector (CP600).

Ref. No. 13

Removal of the CD Player Unit

Precedure 1→2→13

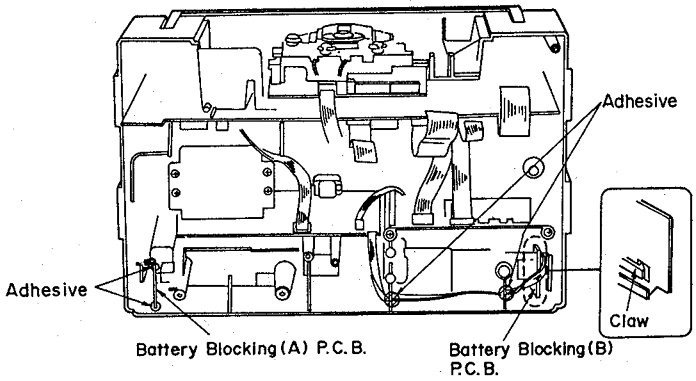

❶
❷
CD Player Unit
CP704
CS701
CS702
CS703
❸
❹

1. Remove the 4 screws (❶~❹).
2. Remove the 4 flat cables (CS701, CS702, CS703).
3. Remove the 1 connector (CP704).

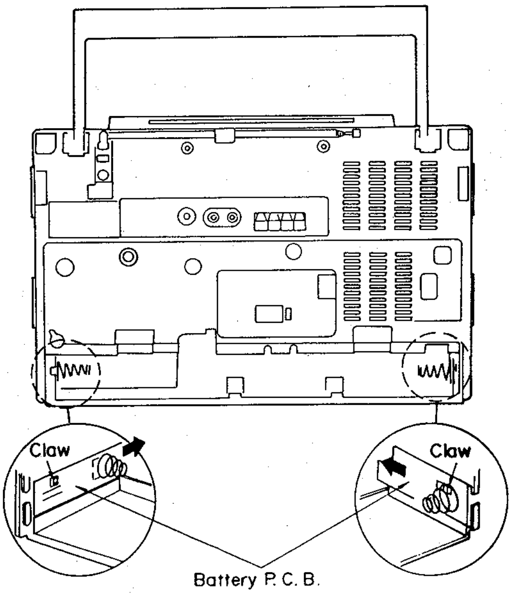
Ref. No. 15

Removal of the Battery P.C.B.

Precedure 7→9→15


Adhesive
Adhesive
Claw
Battery Blocking (A) P.C.B.
Battery Blocking (B) P.C.B.

1. Cut off adhesives with a cutter.
2. Pull out the battery blocking (A) P.C.B.
3. Release the claw and remove the battery blocking (B) P.C.B. in the direction of arrow.

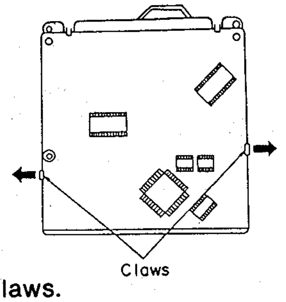

Claw
Claw
Battery P. C. B.

4. Release the claw and remove the battery P.C.B. in the direction of arrow.

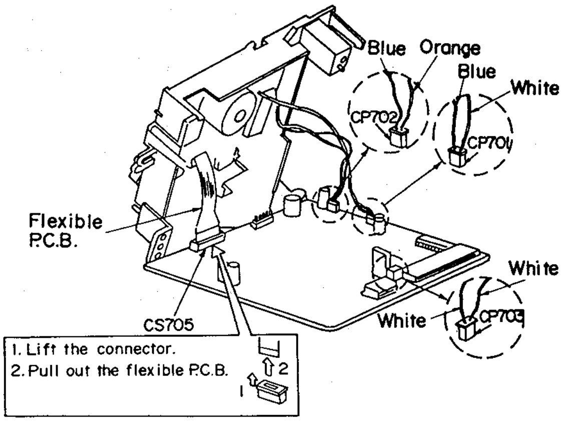
Ref. No. 14

Removal of the CD P.C.B.

Precedure 1→2→13→14



1. Release the 2 claws.


Blue
Orange
Blue
White
CP702
CP701
Flexible P.C.B.
White
White
CP703
CS705
2

1. Lift the connector.
2. Pull out the flexible P.C.B.

2. Remove the 4 connectors (CP701, CP702, CP703, CS705).

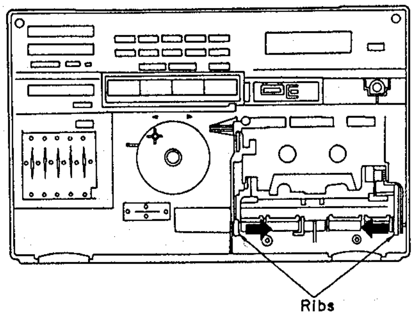
Note:

- Insert a shorting chip to the flexible P.C.B. so as to prevent damages to the laser diode by static electricity.

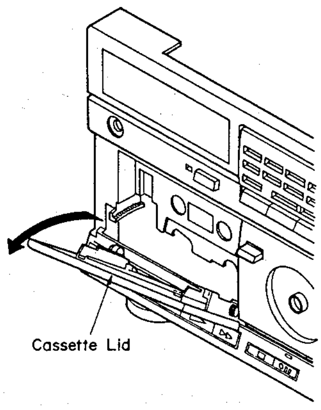
Ref. No. 16

Removal of the Cassette Lid

Precedure 1→16



1. Remove the 2 ribs in the direction of arrows.

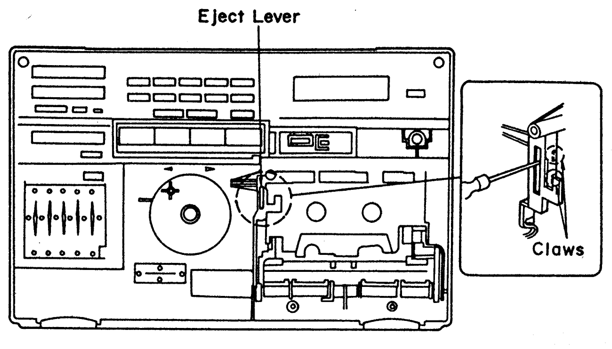

Cassette Lid

2. Remove the cassette lid in the direction of arrow.

Ref. No. 17

Removal of the Eject Lever

Precedure
1→17

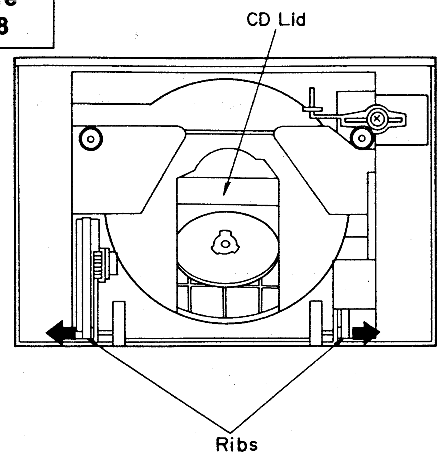

Eject Lever
Claws

- Remove the 2 claws.

Ref. No. 18

Removal of the CD Lid

Precedure
1→2→18

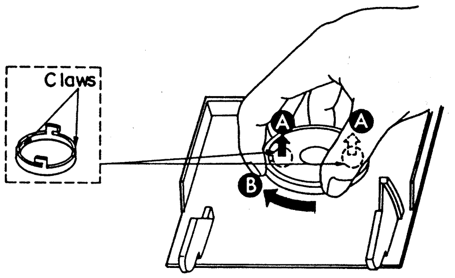


- Remove the ribs in the direction of the arrows.

Ref. No. 19

Removal of the Magnet Holder

Precedure
1→2→18
→19

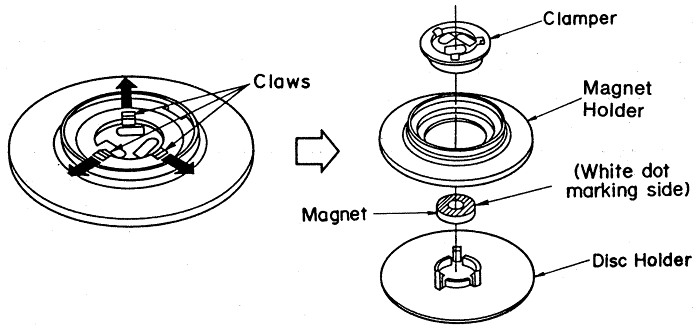


- While lifting the magnet holder in the direction of the arrow Ⓐ, rotate magnet holder in the direction of the arrow Ⓑ and remove the magnet holder.

Ref. No. 20

Removal of the disc holder and magnet

Precedure
1→2→18
→19→20

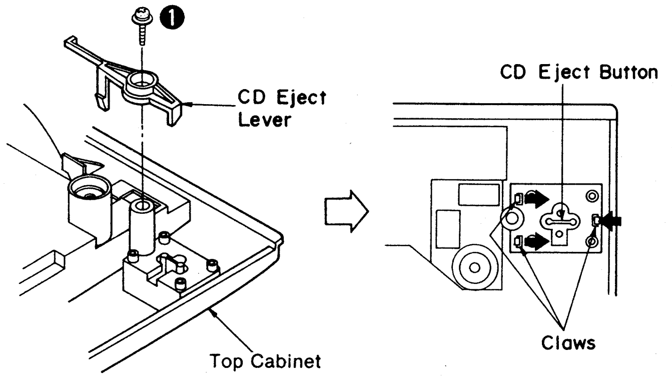

Clamper
Claws
Magnet Holder
(White dot marking side)
Magnet
Disc Holder

- Remove the 3 claws, and remove the magnet.

Ref. No. 21

Removal of the CD Eject Button

Precedure
1→2→18
→21

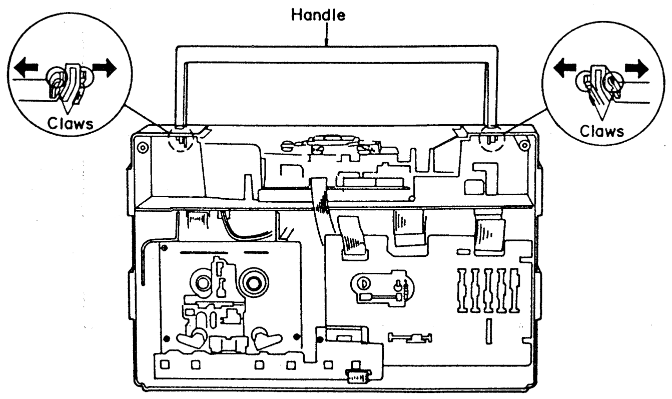

❶
CD Eject Lever
Top Cabinet
CD Eject Button
Claws

1. Remove the 1 screw (❶).
2. Remove the CD eject lever.
3. Release the 3 claws, and remove the CD eject button.

Ref. No. 22

Removal of the Handle

Precedure
22

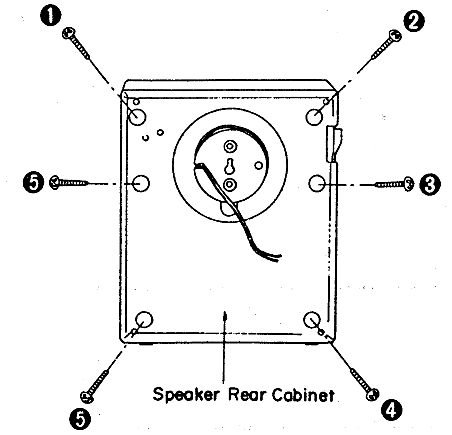

Handle
Claws
Claws

- Remove the 4 claws in the direction of arrow and then remove the handle.

Ref. No. 23

Removal of the Speaker Rear Cabinet

Precedure
23

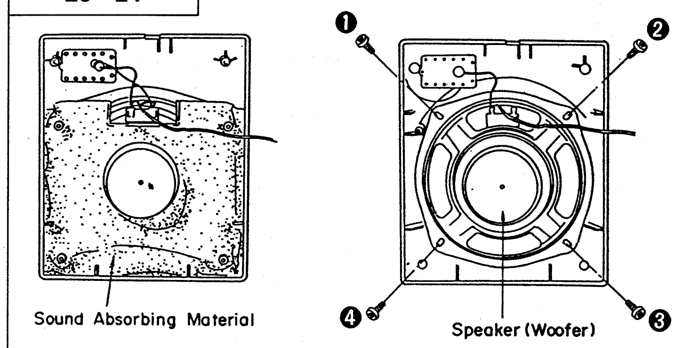

❶
❷
❸
❹
❺
❻
Speaker Rear Cabinet

- Remove the 6 screws (❶~❻), and remove the speaker rear cabinet.

Ref. No. 24

Removal of the Speaker (Woofer)

Precedure
23→24

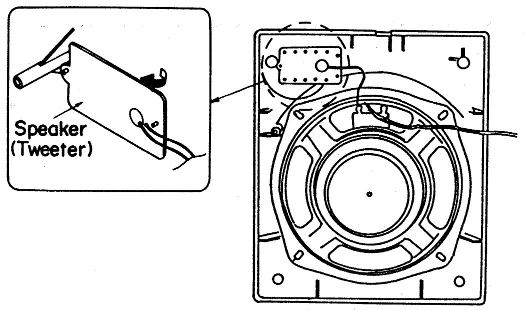

❶
❷
❸
❹
Sound Absorbing Material
Speaker (Woofer)

1. Remove the sound absorbing material.
2. Remove the 4 screws (❶~❹), and remove the speaker.

Ref. No. 25

Removal of the Speaker (Tweeter)

Precedure
23→25

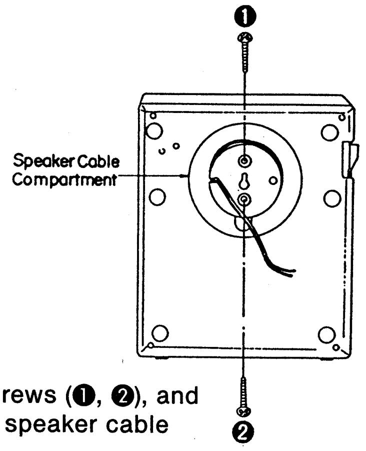

Speaker (Tweeter)

- Remove the tweeter in the direction of the arrow.

Ref. No. 26

Removal of the Speaker Cable Compartment

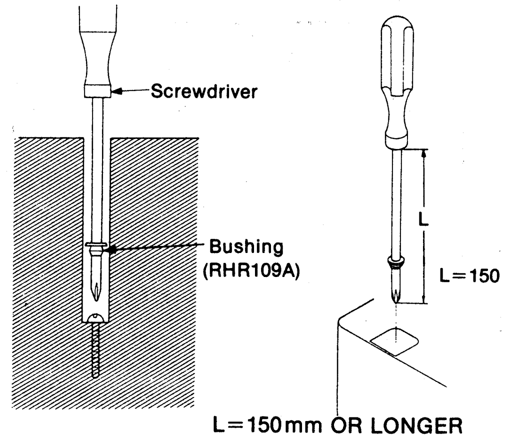
Precedure
26


❶
❷
Speaker Cable Compartment

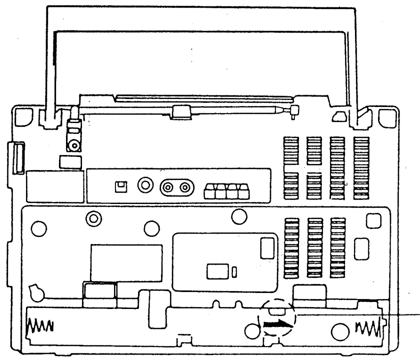
- Remove the 2 screws (❶, ❷), and then remove the speaker cable compartment.

● REMOVAL OF SCREWS

- Use a screwdriver similar to the one in the figure.
- If you attach a bushing (part number: RHR109A) to the tip of the screwdriver as shown in the figure, the screwdriver tip will easily fit in the screw heads and you will be able to remove the screws with ease.


Screwdriver
Bushing (RHR109A)
L
L=150
L=150mm OR LONGER

● WHAT TO DO WHEN THE TAPE IS ENTANGLED



When the tape is caught in the pinch roller, etc. release the tape by turning the pulley on the motor with the screwdriver in the direction of the arrow.

■ HA

The las
clothes
So, be c

● Hand

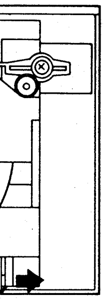
1. Do n
static
shock
2. To pr
static
(FPC
When
job in
3. Take
board
4. Do n
ment)

● Grou

1. Huma
Use the
from yc
2. Work t
Put a c
area w
sheet.

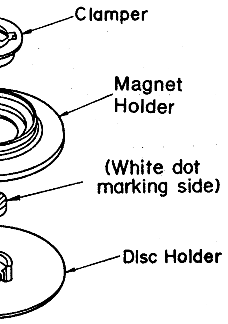
Caution:
The static
through
clothes tc

Lid



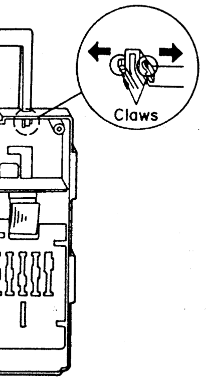
the arrows.

holder and


Clamper
Magnet Holder
(White dot marking side)
Disc Holder

e

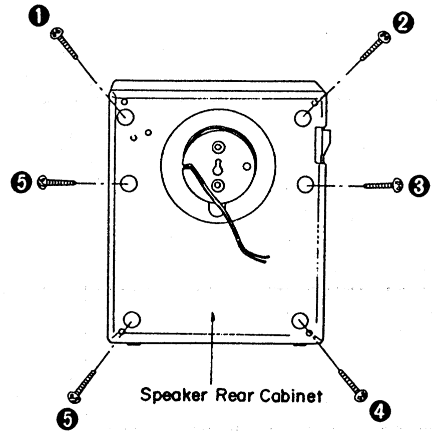
dle



of arrow and

Ref. No. 23 — **Removal of the Speaker Rear Cabinet**

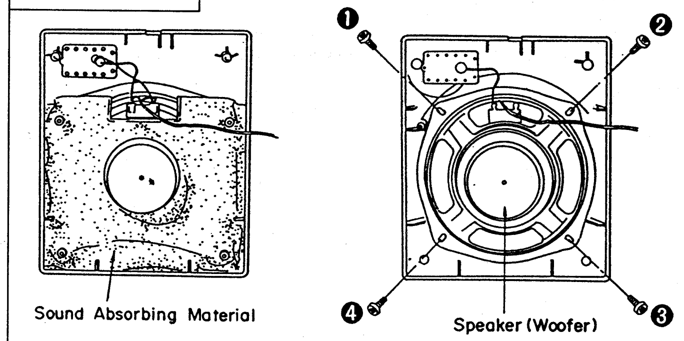
Precedure 23


❶
❷
❸
❹
❺
❻
Speaker Rear Cabinet

- Remove the 6 screws (❶~❻), and remove the speaker rear cabinet.

Ref. No. 24 — **Removal of the Speaker (Woofer)**

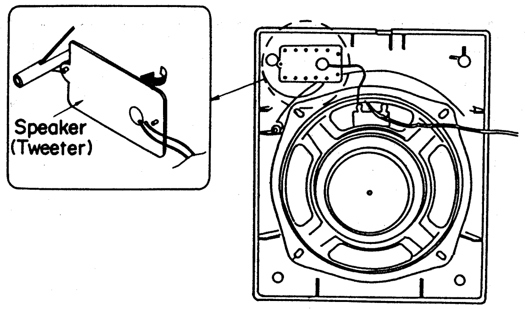
Precedure 23→24


Sound Absorbing Material
❶
❷
❸
❹
Speaker (Woofer)

1. Remove the sound absorbing material.
2. Remove the 4 screws (❶~❹), and remove the speaker.

Ref. No. 25 — **Removal of the Speaker (Tweeter)**

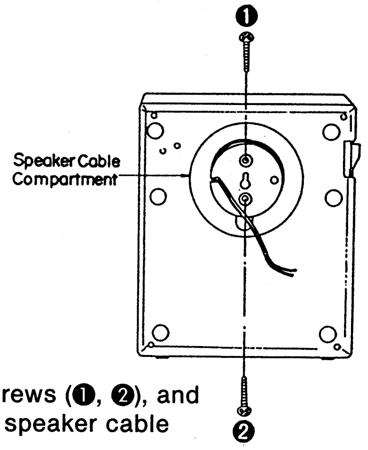
Precedure 23→25


Speaker (Tweeter)

- Remove the tweeter in the direction of the arrow.

Ref. No. 26 — **Removal of the Speaker Cable Compartment**

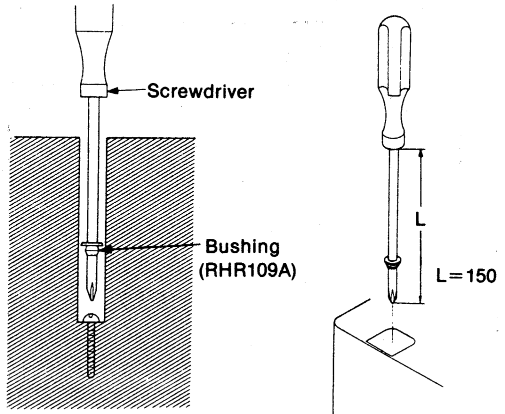
Precedure 26


❶
❷
Speaker Cable Compartment

- Remove the 2 screws (❶, ❷), and then remove the speaker cable compartment.

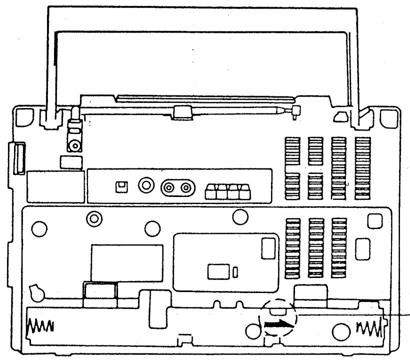
● REMOVAL OF SCREWS

- Use a screwdriver similar to the one in the figure.
- If you attach a bushing (part number: RHR109A) to the tip of the screwdriver as shown in the figure, the screwdriver tip will easily fit in the screw heads and you will be able to remove the screws with ease.


Screwdriver
Bushing (RHR109A)
L
L=150

L=150mm OR LONGER

● WHAT TO DO WHEN THE TAPE IS ENTANGLED



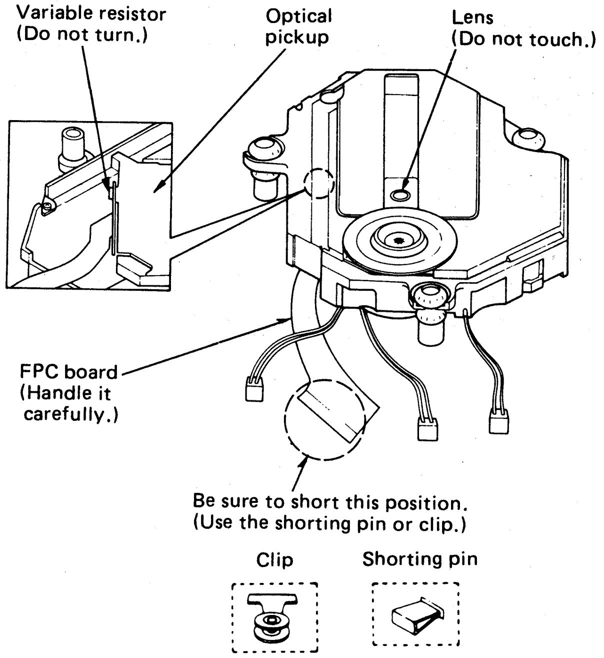
When the tape is caught in the pinch roller, etc. release the tape by turning the pulley on the motor with the screwdriver in the direction of the arrow.

■ HANDLING PRECAUTIONS FOR OPTICAL PICKUP

The laser diode in the optical pickup may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the optical pickup.

• Handling of traverse deck (optical pickup)

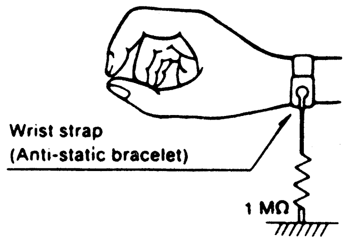
1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an anti-static shorting pin is inserted into the flexible board (FPC board).
   When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

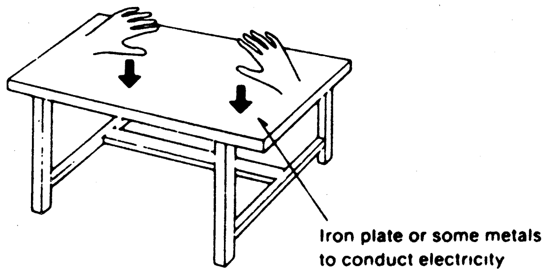

Variable resistor (Do not turn.)
Optical pickup
Lens (Do not touch.)
FPC board (Handle it carefully.)
Be sure to short this position. (Use the shorting pin or clip.)
Clip
Shorting pin

• Grounding for electrostatic breakdown prevention

1. Human body grounding
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
   Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed, and ground the sheet.

Caution:
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the optical pickup.


Wrist strap (Anti-static bracelet)
1 MΩ


Iron plate or some metals to conduct electricity

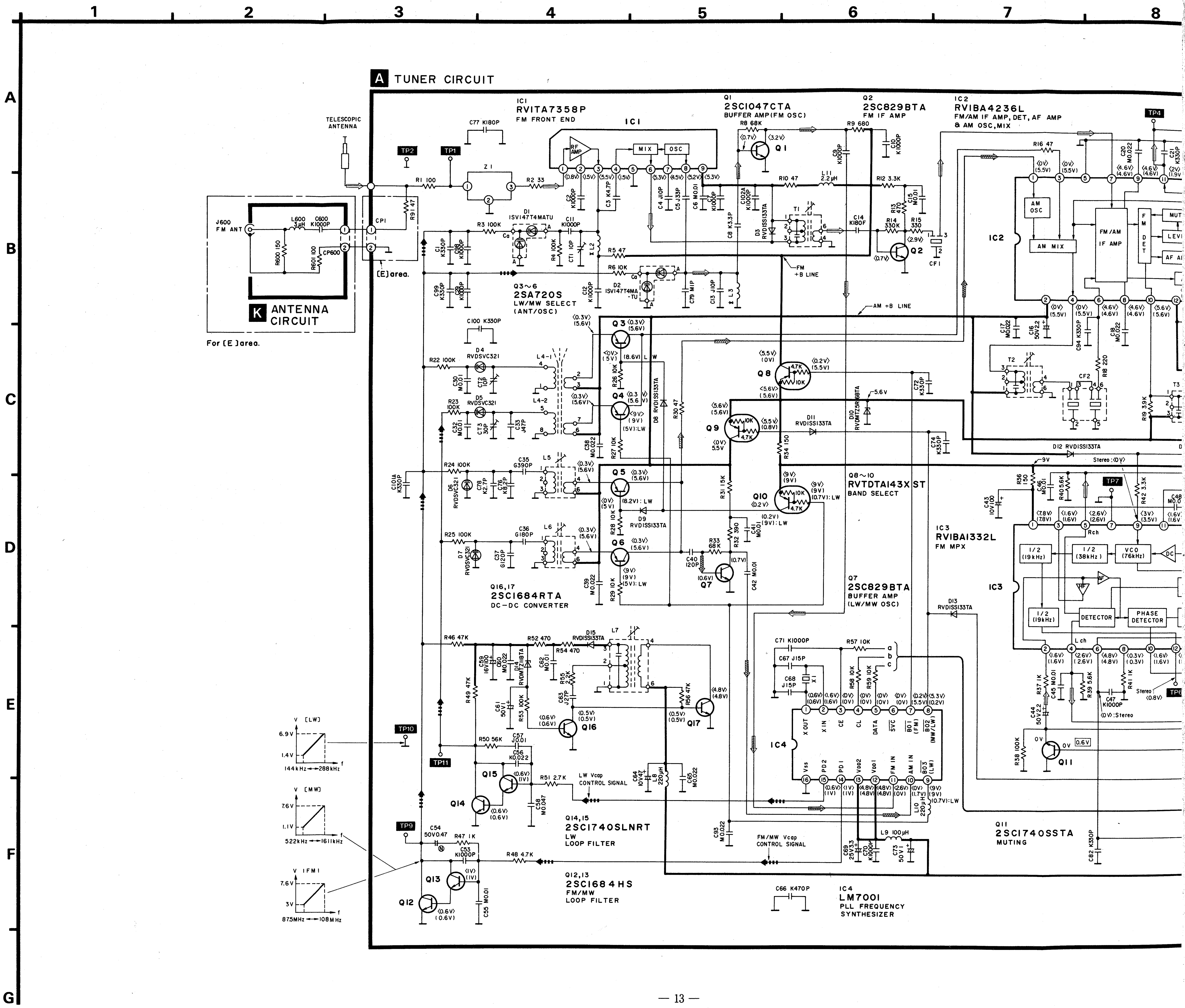
■ SCHEMATIC DIAGRAM

(See parts list on pages 51~53, 63~66.)

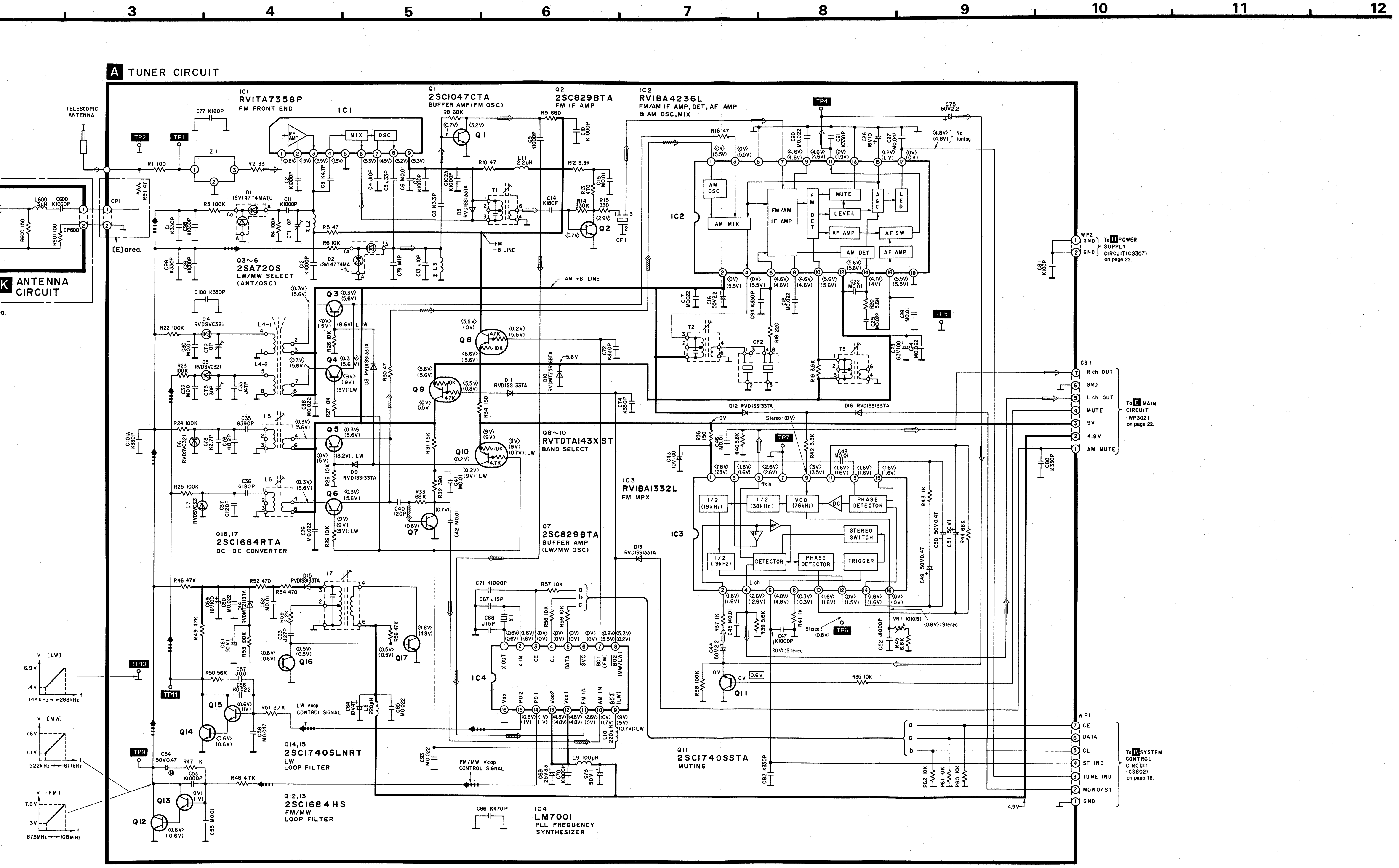
Notes:

1. **VR1**: FM MPX VCO adjustment VR.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   No mark: Playback, < >: FM, ( ): AM,
   ☐ : Muting
   ⇨ : FM signal line
   ▮▮▮➡ : FM/AM Vcap control line
   ▨➡ : FM OSC signal line
   ▨➡ : AM OSC signal line
   ▬ : (+) B line
3. The mark (■) shows test point. e.g. TP1 =test point 1.

- This schematic diagram may be modified at any time with the development of new technology.


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
A TUNER CIRCUIT
K ANTENNA CIRCUIT
For [E] area.
[E] area.
TELESCOPIC ANTENNA
J600 FM ANT
L600 3μH
C600 K1000P
R600 150
R601 100
CP600
CP1
TP1
TP2
TP4
TP7
TP9
TP10
TP11
R1 100
R91 47
Z1
R2 33
IC1 RVITA7358P FM FRONT END
RF AMP
MIX
OSC
C77 K180P
R3 100K
D1 ISV147T4MATU
C11 K1000P
CT1 10P
L2
R5 47
R6 10K
D2 ISV147T4MA-TU
L3
Q1 2SC1047CTA BUFFER AMP (FM OSC)
R8 68K
Q2 2SC829BTA FM IF AMP
R9 680
R10 47
L11 2.2μH
R12 3.3K
R13 470
R14 330K
R15 330
T1
D3 RVDISS133TA
C14 K180F
CF1
IC2 RVIBA4236L FM/AM IF AMP, DET, AF AMP & AM OSC, MIX
R16 47
AM OSC
AM MIX
FM/AM IF AMP
FM DET
MUT
LEVI
AF AI
FM +B LINE
AM +B LINE
T2
CF2
T3
R18 220
R19 3.9K
Q3~6 2SA720S LW/MW SELECT (ANT/OSC)
C100 K330P
R22 100K
D4 RVDSVC321
D5 RVDSVC321
R23 100K
L4-1
L4-2
Q3
Q4
Q5
Q6
R26 10K
R27 10K
R28 10K
R29 10K
R30 47
D8 RVDISS133TA
D9 RVDISS133TA
Q8
Q9
Q10
Q8~10 RVTDTA143XST BAND SELECT
D10 RVDMTZ5R6BTA
D11 RVDISS133TA
D12 RVDISS133TA
R34 150
R31 15K
R32 390
R33 68K
Q7 2SC829BTA BUFFER AMP (LW/MW OSC)
R24 100K
D6 RVDSVC321
L5
C35 G390P
R25 100K
D7 RVDSVC321
C36 G180P
L6
C40 120P
C41 M0.01
C42 M0.01
Q16,17 2SC1684RTA DC-DC CONVERTER
R46 47K
R52 470
R54 470
D15 RVDISS133TA
L7
R49 47K
R53 100K
R55 2.2K
R56 47K
Q16
Q17
R50 56K
C57 J0.01
C56 K0.022
Q15
Q14
R51 2.7K
LW Vcap CONTROL SIGNAL
L8 220μH
Q14,15 2SC1740SLNRT LW LOOP FILTER
C54 50V0.47
R47 1K
C53 K1000P
R48 4.7K
Q13
Q12
C55 M0.01
Q12,13 2SC1684HS FM/MW LOOP FILTER
FM/MW Vcap CONTROL SIGNAL
L9 100μH
L10 220μH
C66 K470P
IC4 LM7001 PLL FREQUENCY SYNTHESIZER
IC4
C71 K1000P
C67 J15P
C68 J15P
X1
R57 10K
R58 10K
R59 10K
X OUT
X IN
CE
CL
DATA
SVC
BO1 (FM)
BO2 (MW/LW)
Vss
PD2
PD1
VDD2
VDD1
FM IN
AM IN
BO3 (LW)
IC3 RVIBA1332L FM MPX
IC3
1/2 (19kHz)
1/2 (38kHz)
VCO (76kHz)
1/2 (19kHz)
DETECTOR
PHASE DETECTOR
D13 RVDISS133TA
R36 150
R40 5.6K
R42 3.3K
R37 1K
R38 100K
R39 5.6K
R41 1K
C47 K1000P
Stereo: (0V)
Stereo: (0.8V)
(0V): Stereo
L ch
Rch
Q11
Q11 2SC1740SSTA MUTING
C82 K330P
V [LW]
6.9V
1.4V
144kHz→288kHz
V [MW]
7.6V
1.1V
522kHz→1611kHz
V [FM]
7.6V
3V
87.5MHz→108MHz
f

A TUNER CIRCUIT


3
4
5
6
7
8
9
10
11
12
TELESCOPIC ANTENNA
K ANTENNA CIRCUIT
[E] area.
TP1
TP2
TP4
TP5
TP6
TP7
TP9
TP10
TP11
IC1 RVITA7358P FM FRONT END
IC1
RF AMP
MIX
OSC
Q1 2SC1047CTA BUFFER AMP(FM OSC)
Q2 2SC829BTA FM IF AMP
IC2 RVIBA4236L FM/AM IF AMP, DET, AF AMP & AM OSC, MIX
AM OSC
AM MIX
FM/AM IF AMP
FM DET
MUTE
LEVEL
AGC
LED
AF AMP
AF SW
AM DET
FM +B LINE
AM +B LINE
Q3~6 2SA720S LW/MW SELECT (ANT/OSC)
Q8~10 RVTDTA143XST BAND SELECT
Q7 2SC829BTA BUFFER AMP (LW/MW OSC)
Q16,17 2SC1684RTA DC-DC CONVERTER
IC3 RVIBA1332L FM MPX
1/2 (19kHz)
1/2 (38kHz)
VCO (76kHz)
DC
PHASE DETECTOR
STEREO SWITCH
DETECTOR
TRIGGER
IC4 LM7001 PLL FREQUENCY SYNTHESIZER
X OUT
X IN
CE
CL
DATA
SVC
BO1 (FM)
BO2 (MW/LW)
Vss
PD2
PD1
VDD2
VDD1
FM IN
AM IN
BO3 (LW)
Q11 2SC1740SSTA MUTING
Q14,15 2SC1740SLNRT LW LOOP FILTER
Q12,13 2SC1684HS FM/MW LOOP FILTER
LW Vcap CONTROL SIGNAL
FM/MW Vcap CONTROL SIGNAL
WP2 GND GND
To H POWER SUPPLY CIRCUIT(CS307) on page 23.
CS1 Rch OUT GND Lch OUT MUTE 9V 4.9V AM MUTE
To E MAIN CIRCUIT (WP302) on page 22.
WP1 CE DATA CL ST IND TUNE IND MONO/ST GND
To B SYSTEM CONTROL CIRCUIT (CS802) on page 18.
(4.8V) No (4.8V) tuning
Stereo:(0V)
Stereo (0.8V)
(0V):Stereo
(0.8V):Stereo
V [LW] 6.9V 1.4V 144kHz→←288kHz f
V [MW] 7.6V 1.1V 522kHz→←1611kHz f
V [FM] 7.6V 3V 87.5MHz→←108MHz f

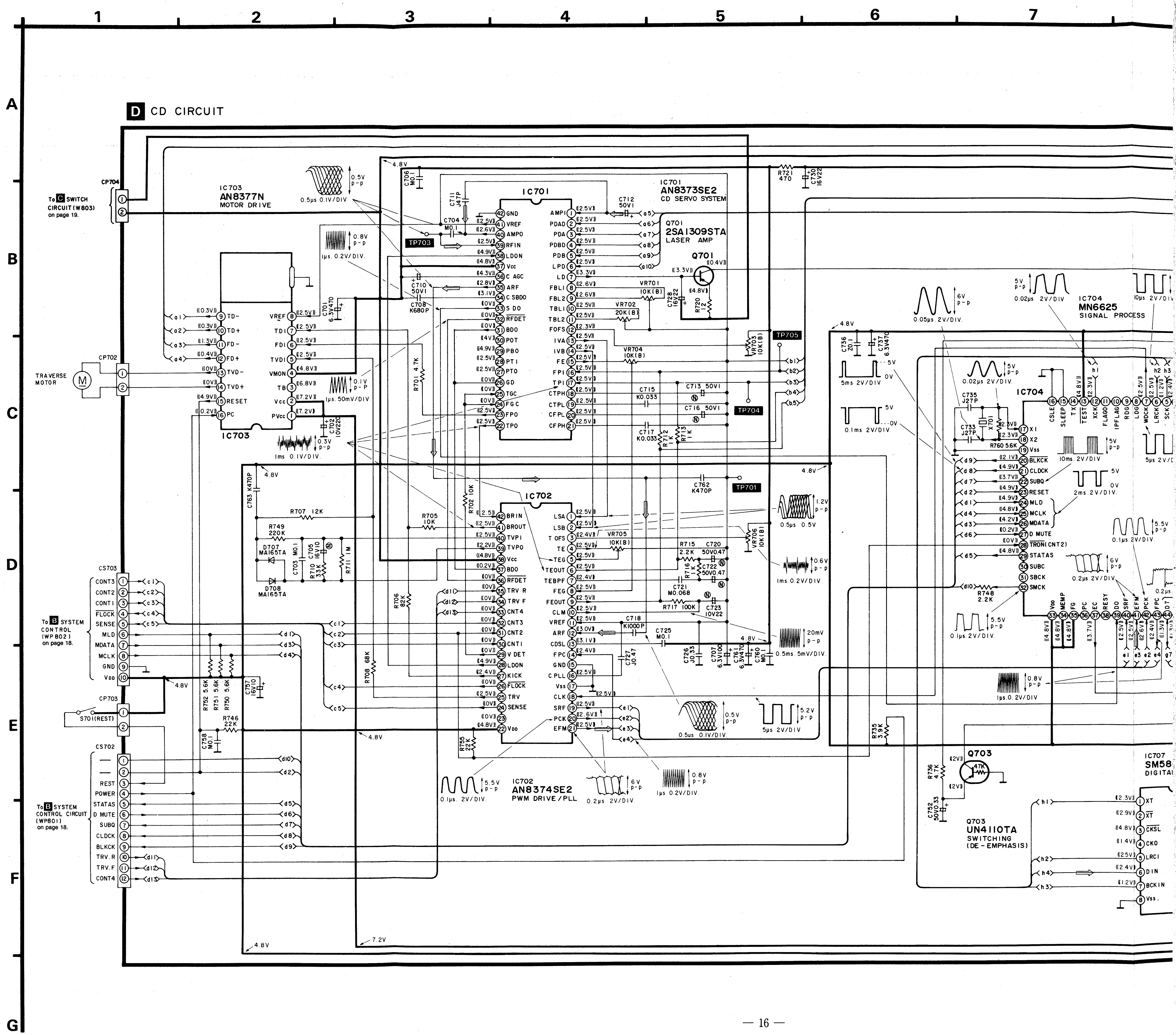
■ SCHEMATIC DIAGRAM

(See parts list on pages 56 and 57.)

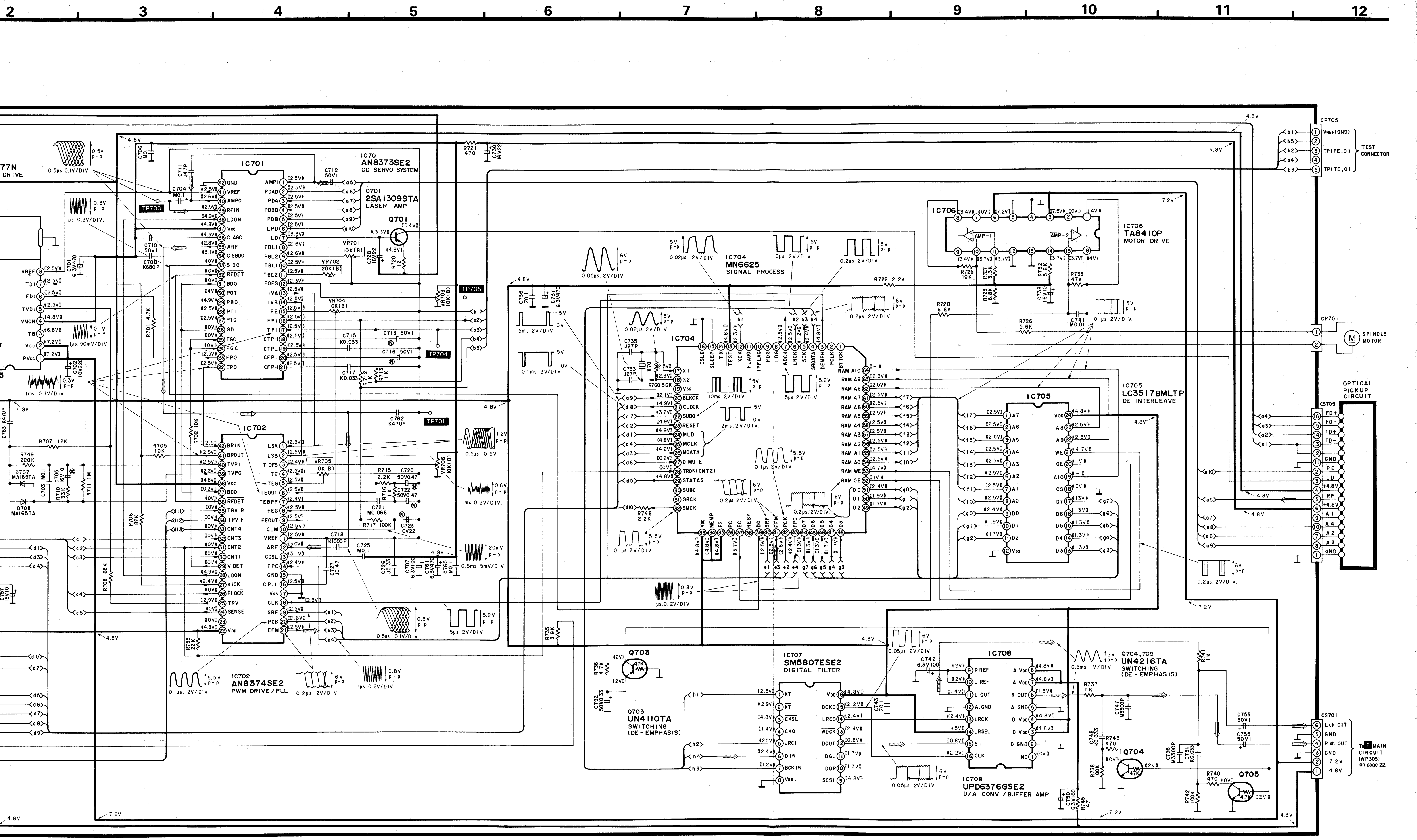
Notes:

1. **S701** : Rest switch.
2. **VR701** : Best eye adjustment VR.
3. **VR702** : Tracking balance adjustment VR.
4. **VR703** : Focus offset adjustment VR.
5. **VR704** : Focus gain adjustment VR.
6. **VR705** : Tracking gain adjustment VR.
7. **VR706** : Tracking offset adjustment VR.
8. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   (( )): CD
   ⇨ : CD SIGNAL LINE
   ▬ : (+) B LINE
9. The mark (■) shows test point. e.g. **TP1** =test point 1.

- **This schematic diagram may be modified at any time with the development of new technology.**



D CD CIRCUIT
IC703 AN8377N MOTOR DRIVE
IC701 AN8373SE2 CD SERVO SYSTEM
Q701 2SA1309STA LASER AMP
IC702 AN8374SE2 PWM DRIVE/PLL
IC704 MN6625 SIGNAL PROCESS
Q703 UN4110TA SWITCHING (DE-EMPHASIS)
IC707 SM58 DIGITAL
To C SWITCH CIRCUIT (W803) on page 19.
To B SYSTEM CONTROL (WP802) on page 18.
To B SYSTEM CONTROL CIRCUIT (WP801) on page 18.
TRAVERSE MOTOR
CP704
CP702
CS703
CP703
CS702
S701 (REST)
TP701
TP703
TP704
TP705
VR701 10K(B)
VR702 20K(B)
VR703 10K(B)
VR704 10K(B)
VR705 10K(B)
VR706 10K(B)


IC701
AN8373SE2
CD SERVO SYSTEM
Q701
2SA1309STA
LASER AMP
IC702
AN8374SE2
PWM DRIVE / PLL
IC704
MN6625
SIGNAL PROCESS
IC705
LC3517BMLTP
DE INTERLEAVE
IC706
TA8410P
MOTOR DRIVE
IC707
SM5807ESE2
DIGITAL FILTER
IC708
UPD6376GSE2
D/A CONV. / BUFFER AMP
Q703
UN4110TA
SWITCHING
(DE - EMPHASIS)
Q704, 705
UN4216TA
SWITCHING
(DE - EMPHASIS)
CP705
TEST CONNECTOR
CP701
SPINDLE MOTOR
CS705
OPTICAL PICKUP CIRCUIT
CS701
L ch OUT
GND
R ch OUT
GND
7.2V
4.8V
To E MAIN CIRCUIT (WP305) on page 22.
TP701
TP703
TP704
TP705
4.8V
7.2V

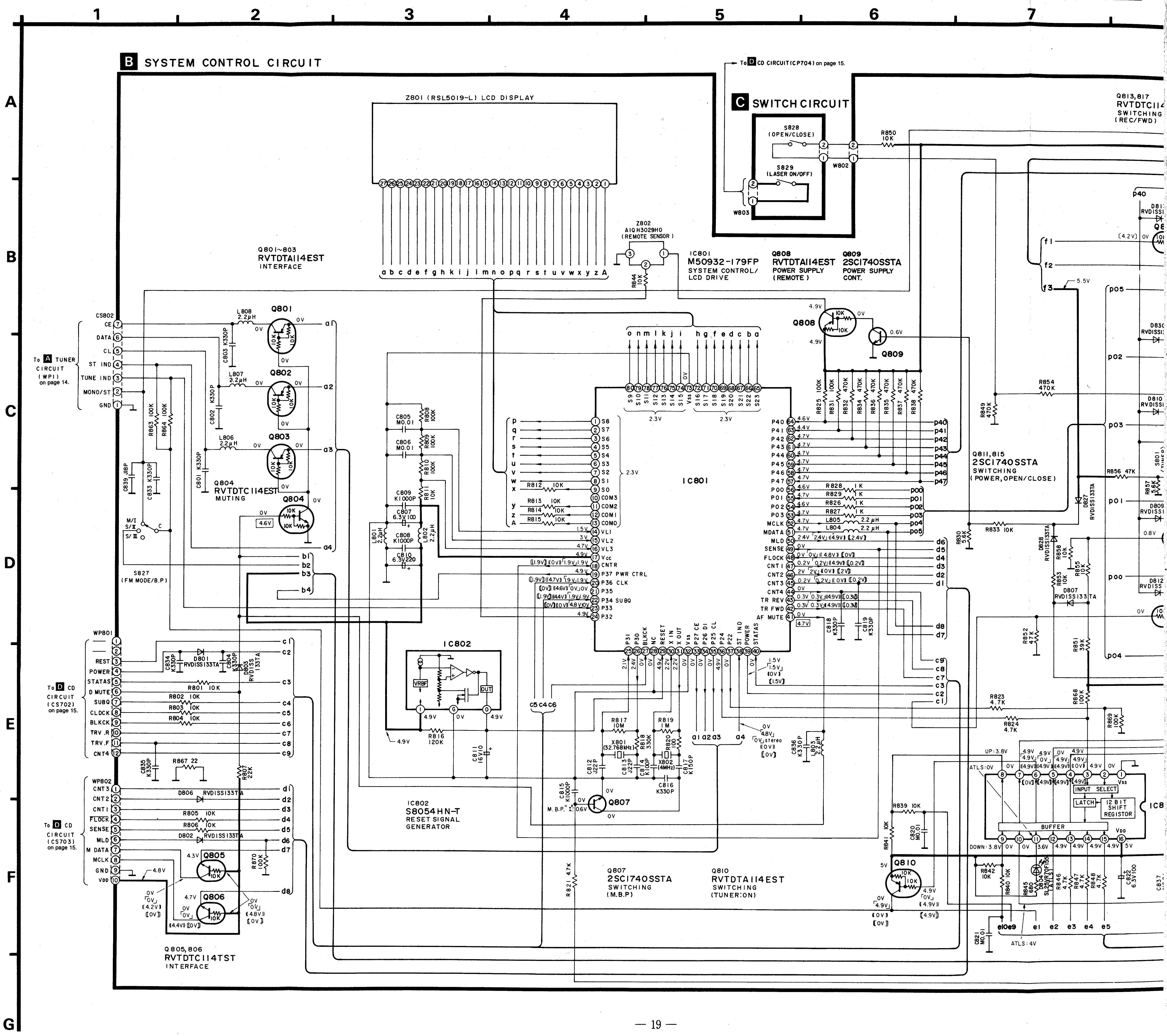
SCHEMATIC DIAGRAM

(See parts list on pages 51~53, 63~66.)

Notes:

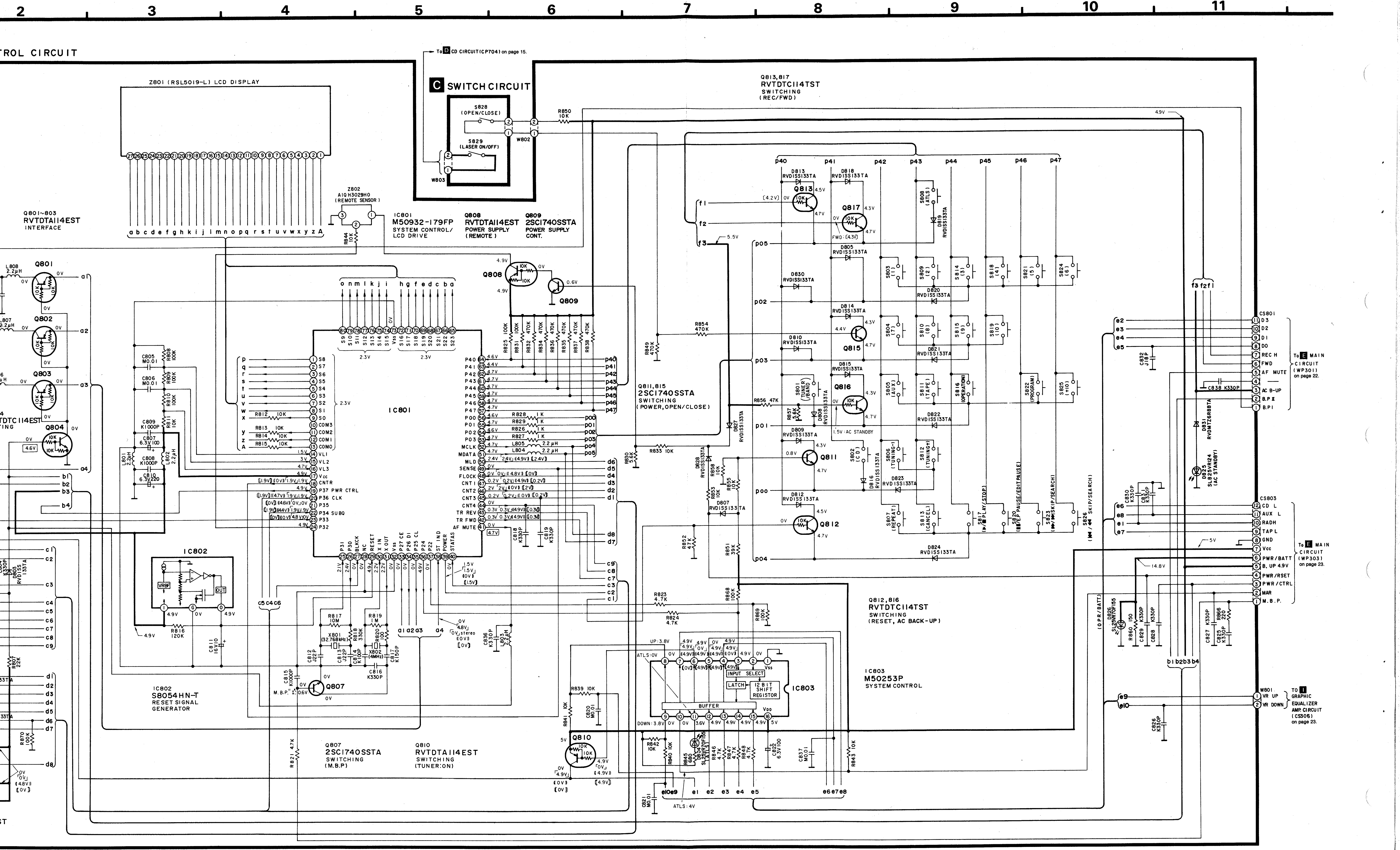
1. **S801** : Tuner/Band select switch.
2. **S802** : CD select switch.
3. **S803** : Numeric switch "1".
4. **S804** : Numeric switch "7".
5. **S805** : Auxiliary input select switch.
6. **S806** : Tuning "−" switch.
7. **S807** : Repeat switch.
8. **S808** : ATLS (Auto Tape Level Settings) switch.
9. **S809** : Numeric switch "2".
10. **S810** : Numeric siwtch "8".
11. **S811** : Tape select switch.
12. **S812** : Tuning "+" switch.
13. **S813** : Cancel switch.
14. **S814** : Numeric switch "3".
15. **S815** : Numeric switch "9".
16. **S816** : Operation switch.
17. **S817** : Play/Stop switch.
18. **S818** : Numeric switch "4".
19. **S819** : Numeric switch "10".
20. **S820** : Pause/Edit pause switch.
21. **S821** : Numeric switch "5".
22. **S822** : Program switch.
23. **S823** : Skip/Search switch (▶▶/▶▶|)
24. **S824** : Numeric switch "6".
25. **S825** : Numeric switch "+10".
26. **S826** : Skip/Search switch (|◀◀/◀◀)
27. **S827** : FM mode/Beat proof select switch in "MONO/I" position. (M/I...MONO/I, S/II...STEREO/II, S/III...STEREO/III)
28. **S828** : Open/Close switch. (CD lid close detection).
29. **S829** : Laser ON/OFF switch.
30. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
    No mark: Playback, [ ]: Recording, ☐: Muting, ⌜ ⌟: Tuner, (( )): CD, [[ ]]: AUX

- This schematic diagram may be modified at any time with the development of new technology.



1
2
3
4
5
6
7
A
B
C
D
E
F
G
B SYSTEM CONTROL CIRCUIT
Z801 (RSL5019-L) LCD DISPLAY
To D CD CIRCUIT (CP704) on page 15.
C SWITCH CIRCUIT
S828 (OPEN/CLOSE)
S829 (LASER ON/OFF)
W802
W803
R850 10K
Q813,817 RVTDTC114 SWITCHING (REC/FWD)
Z802 A10H3029H0 (REMOTE SENSOR)
Q801~803 RVTDTA114EST INTERFACE
IC801 M50932-179FP SYSTEM CONTROL/ LCD DRIVE
Q808 RVTDTA114EST POWER SUPPLY (REMOTE)
Q809 2SC1740SSTA POWER SUPPLY CONT.
Q801
Q802
Q803
Q804 RVTDTC114EST MUTING
Q808
Q809
CS802
CE
DATA
CL
ST IND
TUNE IND
MONO/ST
GND
To A TUNER CIRCUIT (WP1) on page 14.
S827 (FM MODE/B.P)
IC801
IC802
IC802 S8054HN-T RESET SIGNAL GENERATOR
Q811,815 2SC1740SSTA SWITCHING (POWER, OPEN/CLOSE)
WP801
REST
POWER
STATAS
D MUTE
SUBQ
CLDCK
BLKCK
TRV.R
TRV.F
CNT4
To D CD CIRCUIT (CS702) on page 15.
WP802
CNT3
CNT2
CNT1
FLOCK
SENSE
MLD
M DATA
MCLK
GND
VDD
To D CD CIRCUIT (CS703) on page 15.
Q805
Q806
Q805, 806 RVTDTC114TST INTERFACE
Q807
Q807 2SC1740SSTA SWITCHING (M.B.P)
Q810
Q810 RVTDTA114EST SWITCHING (TUNER:ON)
X801 (32.768kHz)
X802 (4MHz)
INPUT SELECT
LATCH
12 BIT SHIFT REGISTOR
BUFFER
IC8

TROL CIRCUIT


2
3
4
5
6
7
8
9
10
11
Z801 (RSL5019-L) LCD DISPLAY
To D CD CIRCUIT (CP704) on page 15.
C SWITCH CIRCUIT
S828 (OPEN/CLOSE)
S829 (LASER ON/OFF)
W802
W803
R850 10K
Z802 A1Q H3029H0 (REMOTE SENSOR)
R844 10K
Q801~803 RVTDTA114EST INTERFACE
IC801 M50932-179FP SYSTEM CONTROL/ LCD DRIVE
Q808 RVTDTA114EST POWER SUPPLY (REMOTE)
Q809 2SC1740SSTA POWER SUPPLY CONT.
Q813, 817 RVTDTC114TST SWITCHING (REC/FWD)
Q811, 815 2SC1740SSTA SWITCHING (POWER, OPEN/CLOSE)
Q812, 816 RVTDTC114TST SWITCHING (RESET, AC BACK-UP)
IC803 M50253P SYSTEM CONTROL
IC802 S8054HN-T RESET SIGNAL GENERATOR
Q807 2SC1740SSTA SWITCHING (M.B.P)
Q810 RVTDTA114EST SWITCHING (TUNER:ON)
Q801
Q802
Q803
Q804
Q807
Q808
Q809
Q810
Q811
Q812
Q813
Q815
Q816
Q817
IC801
IC802
IC803
L808 2.2μH
L807 2.2μH
C805 M0.01
C806 M0.01
C807 6.3V100
C808 K1000P
C809 K1000P
C810 6.3V220
L801 2.2μH
L802 2.2μH
R808 100K
R809 100K
R810 100K
R811 10K
R812 10K
R813 10K
R814 10K
R815 10K
R816 120K
C811 16V10
R817 10M
R818 330K
R819 1M
R820 100
X801 (32.768kHz)
X802 (4MHz)
C812 J22P
C813 J22P
C814 K100P
C815 K1000P
C816 K330P
C817 K150P
R821 4.7K
R823 4.7K
R824 4.7K
R825 100K
R826 1K
R827 1K
R828 1K
R829 1K
R830 5.6K
R831 100K
R832 470K
R833 10K
R834 470K
R836 470K
R837 470K
R838 470K
R839 10K
R840 10K
R841 10K
R842 10K
R843 10K
R845 560
R846 4.7K
R847 4.7K
R848 4.7K
R849 470K
R851 39K
R852 47K
R853 10K
R854 470K
R855 10K
R856 47K
R857 5.6K
R858 10K
R860 150
R866 220
R868 100K
R869 100K
R870 100K
R807 22K
L803 2.2μH
L804 2.2μH
L805 2.2μH
C818 K330P
C819 K330P
C820 M0.01
C821 M0.01
C822 6.3V100
C825 K330P
C826 K330P
C827 K330P
C828 K330P
C829 K330P
C830 K330P
C831 K330P
C832 J18P
C836 K330P
C837 M0.01
C838 K330P
D803 RVD1SS133TA
D805 RVD1SS133TA
D807 RVD1SS133TA
D808 RVD1SS133TA
D809 RVD1SS133TA
D810 RVD1SS133TA
D812 RVD1SS133TA
D813 RVD1SS133TA
D814 RVD1SS133TA
D815 RVD1SS133TA
D816 RVD1SS133TA
D818 RVD1SS133TA
D819 RVD1SS133TA
D820 RVD1SS133TA
D821 RVD1SS133TA
D822 RVD1SS133TA
D823 RVD1SS133TA
D824 RVD1SS133TA
D827 RVD1SS133TA
D828 RVD1SS133TA
D830 RVD1SS133TA
D826 SL25VR70F155 (OPR/BATT)
D825 SLB25VR124 (AC STANDBY)
D831 RVDMTZ6R8BTA
S801 (TUNER/BAND)
S802 (CD)
S803 (1)
S804 (7)
S805 (AUX)
S806 (TUNING-)
S807 (REPEAT)
S808 (ATLS)
S809 (2)
S810 (8)
S811 (TAPE)
S812 (TUNING+)
S813 (CANCEL)
S814 (3)
S815 (9)
S816 (OPERATION)
S817 (▶/■ PLAY/STOP)
S818 (4)
S819 (10)
S820 (■/■ P PAUSE/EDIT PAUSE)
S821 (5)
S822 (PROGRAM)
S823 (▶▶/▶▶| SKIP/SEARCH)
S824 (6)
S825 (+10)
S826 (|◀◀/◀◀ SKIP/SEARCH)
p40 p41 p42 p43 p44 p45 p46 p47
p05 p02 p03 p01 p00 p04
f1 f2 f3
FWD: [4.3V]
1.5V: AC STANDBY
CS801
D3 D2 D1 D0 REC H FWD AF MUTE — AC B-UP B.P II B.P I
To E MAIN CIRCUIT (WP301) on page 22.
CS803
CD L AUX L RADH TAP L GND Vcc PWR/BATT B. UP 4.9V PWR/RSET PWR/CTRL MAR M.B.P.
To E MAIN CIRCUIT (WP303) on page 23.
W801
VR UP VR DOWN
To I GRAPHIC EQUALIZER AMP. CIRCUIT (CS306) on page 23.
S8 S7 S6 S5 S4 S3 S2 S1 S0 COM3 COM2 COM1 COM0 VL1 VL2 VL3 Vcc CNTR P37 PWR CTRL P36 CLK P35 P34 SUBQ P33 P32
P40 P41 P42 P43 P44 P45 P46 P47 P00 P01 P02 P03 MCLK MDATA MLD SENSE FLOCK CNT1 CNT2 CNT3 CNT4 TR REV TR FWD AF MUTE
P31 P30 BLKCK NC RESET X IN X OUT Vss P27 CE P26 DI P25 CL P24 P22 ST IND POWER STATAS
S9 S10 S11 S12 S13 S14 S15 Vss S16 S17 S18 S19 S20 S21 S22 S23
INPUT SELECT
LATCH
12 BIT SHIFT REGISTOR
BUFFER
Vss Vdd
UP: 3.8V
DOWN: 3.8V
ATLS: 0V
ATLS: 4V
M.B.P.
VRBF
OUT
e1 e2 e3 e4 e5 e6 e7 e8 e9 e10
b1 b2 b3 b4
c1 c2 c3 c4 c5 c6 c7 c8 c9
d1 d2 d3 d4 d5 d6 d7 d8
a1 a2 a3 a4
4.9V
14.8V
5V
5.5V

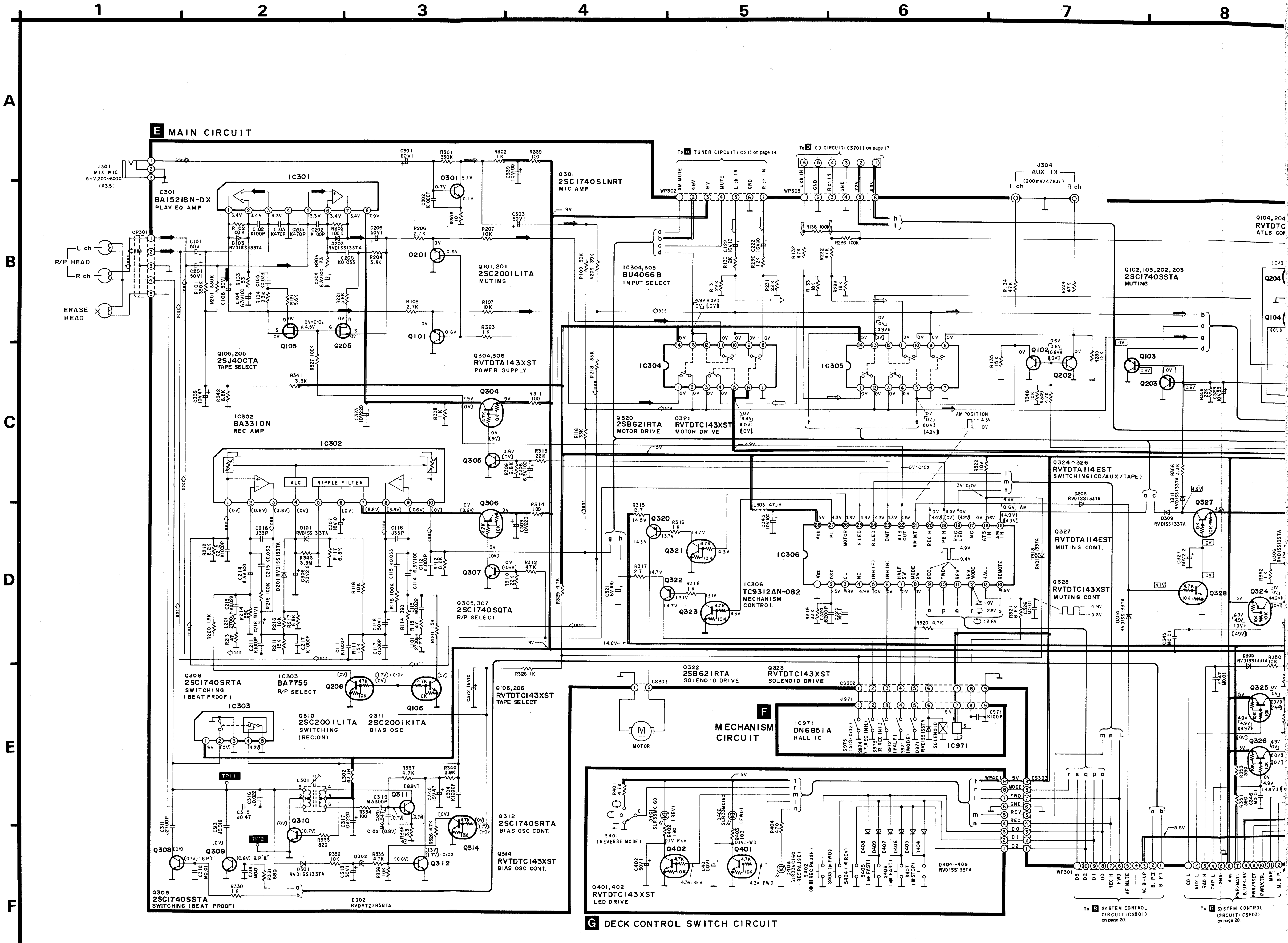
■ SCHEMATIC DIAGRAM

(See parts list on pages 51~53, 63~66.)

Notes:

1. **S301** : Microprocessor beat proof switch in "**II**" position.
2. **S302** : AC/DC select switch in "AC" position.
3. **S303-1, 303-2**: XBS switch in "OFF" position.
4. **S401** : Reverse mode select switch in " ⇄ " position.
   (↻ ...Auto-continous,
   ⊃ ...Auto-reverse, ⇄ ...Non-reverse)
5. **S402** : Rec pause switch.
6. **S403** : Forward playback switch.
7. **S404** : Reverse playback switch.
8. **S405** : Fast switch. (▶▶)
9. **S406** : Fast switch. (◀◀)
10. **S407** : Stop switch.
11. **S971** : Mode switch in "OFF" position.
12. **S972** : Cassette half detection switch in "OFF" position.
13. **S973** : Reverse rec. inhibit switch in "OFF" position.
14. **S974** : Forward rec. inhibit switch in "OFF" position.
15. **S975** : ATS/CrO$_2$ switch in "OFF" position.
16. **VR501-1, 501-2**: Volume control.
17. **VR502** : Balance control VR.
18. **VR503-1, 503-2**: Graphic EQ. (100 Hz) control VR.
19. **VR504-1, 504-2**: Graphic EQ. (330 Hz) control VR.
20. **VR505-1, 505-2**: Graphic EQ. (1 kHz) control VR.
21. **VR506-1, 506-2**: Graphic EQ. (3.3 kHz) control VR.
22. **VR507-1, 507-2**: Graphic EQ. (10 kHz) control VR.
23. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
    No mark: Playback, [ ]: Recording, ⌜ ⌟ : Tuner,
    (( )): CD, [[ ]]: AUX
    ⇨ : FM signal line, ➡ : Playback signal line,
    ⇨ : CD signal line, ⇨ : Main signal line,
    ▯▯▯⇨ : Recording signal line, ▨⇨ : MIC signal line,
    ▬ : (+) B line
24. Battery current:
    No signal (Radio)...160 mA (VR MIN)
    maximum output (VR MAX)
    Radio .... 1.9 A
    Tape (PLAY) .... 2.13 A
    CD Play (0 dB) .... 2.18 A
    Meaurement instruction
    (Radio: FM 60 dB, 30% Mod.
    Tape: 315 Hz, 0 dB)
25. The mark (■) shows test point. e.g. **TP1** =test point 1.
26. Important safety notice.
    Components identified by ⚠ mark have special characteristics important for safety.
    When replacing any of these components, use only manufacturer's specified parts.

- **This schematic diagram may be modified at any time with the development of new technology.**


1
2
3
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5
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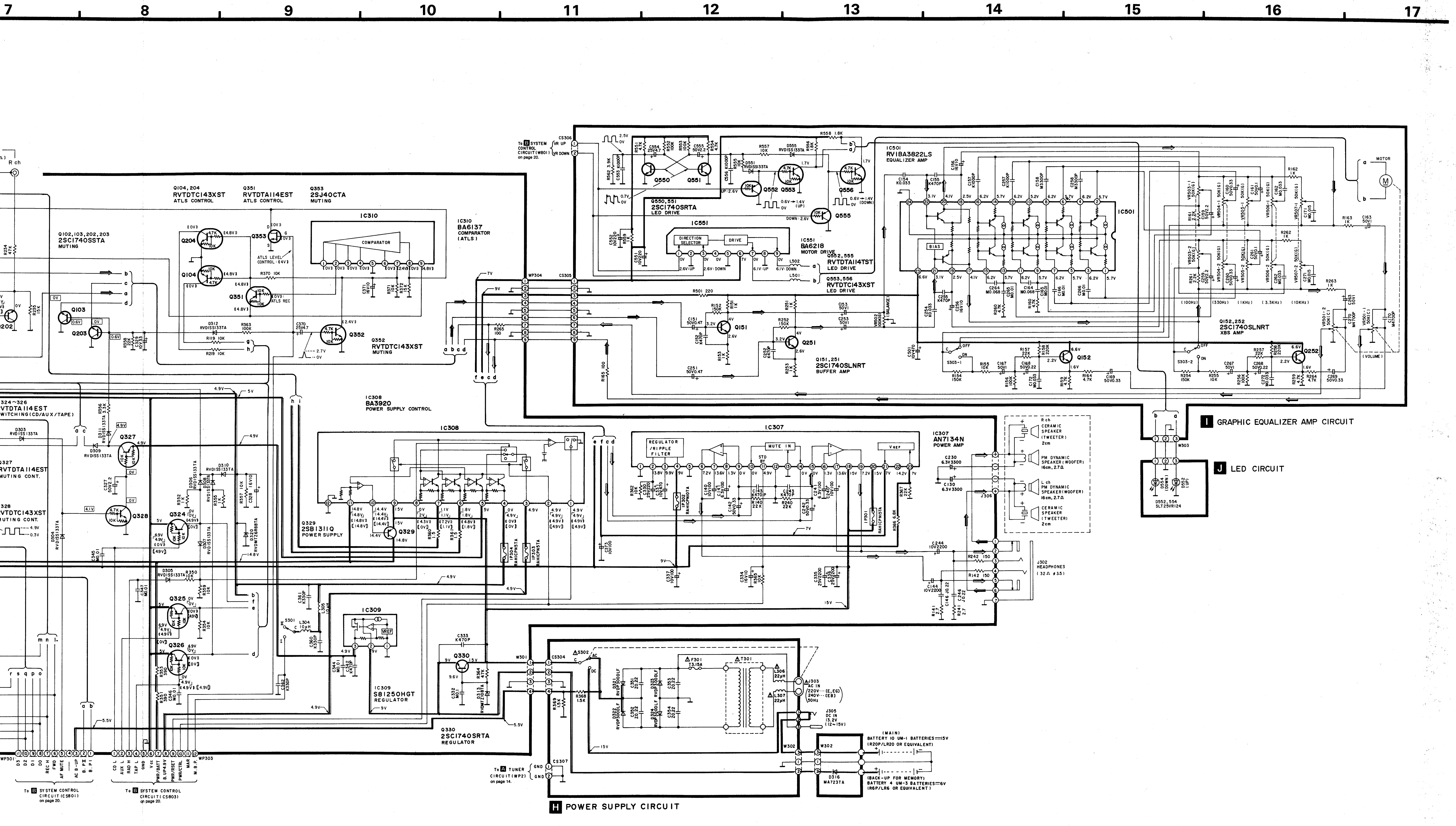
7
8
A
B
C
D
E
F
E MAIN CIRCUIT
J301 MIX MIC 5mV,200~600Ω (φ3.5)
R/P HEAD
L ch
R ch
ERASE HEAD
CP301
IC301 BA15218N-DX PLAY EQ AMP
Q301 2SC1740SLNRT MIC AMP
Q101,201 2SC2001LITA MUTING
Q105,205 2SJ40CTA TAPE SELECT
Q304,306 RVTDTA143XST POWER SUPPLY
IC302 BA3310N REC AMP
ALC
RIPPLE FILTER
Q305,307 2SC1740SQTA R/P SELECT
Q308 2SC1740SRTA SWITCHING (BEAT PROOF)
IC303 BA7755 R/P SELECT
Q106,206 RVTDTC143XST TAPE SELECT
Q310 2SC2001LITA SWITCHING (REC:ON)
Q311 2SC2001KITA BIAS OSC
Q312 2SC1740SRTA BIAS OSC CONT.
Q314 RVTDTC143XST BIAS OSC CONT.
Q309 2SC1740SSTA SWITCHING (BEAT PROOF)
D302 RVDMTZ7R5BTA
TP11
TP12
To A TUNER CIRCUIT (CS1) on page 14.
To D CD CIRCUIT (CS701) on page 17.
J304 AUX IN (200mV/47kΩ)
L ch
R ch
IC304,305 BU4066B INPUT SELECT
IC304
IC305
Q320 2SB621RTA MOTOR DRIVE
Q321 RVTDTC143XST MOTOR DRIVE
AM POSITION
IC306
IC306 TC9312AN-082 MECHANISM CONTROL
Q322 2SB621RTA SOLENOID DRIVE
Q323 RVTDTC143XST SOLENOID DRIVE
MOTOR
F MECHANISM CIRCUIT
IC971 DN6851A HALL IC
IC971
Q324~326 RVTDTA114EST SWITCHING (CD/AUX/TAPE)
Q327 RVTDTA114EST MUTING CONT.
Q328 RVTDTC143XST MUTING CONT.
Q102,103,202,203 2SC1740SSTA MUTING
Q104,204 RVTDTC ATLS CON
S401 (REVERSE MODE)
Q401,402 RVTDTC143XST LED DRIVE
D404~409 RVD1SS133TA
G DECK CONTROL SWITCH CIRCUIT
To B SYSTEM CONTROL CIRCUIT (CS801) on page 20.
To B SYSTEM CONTROL CIRCUIT (CS803) on page 20.


7
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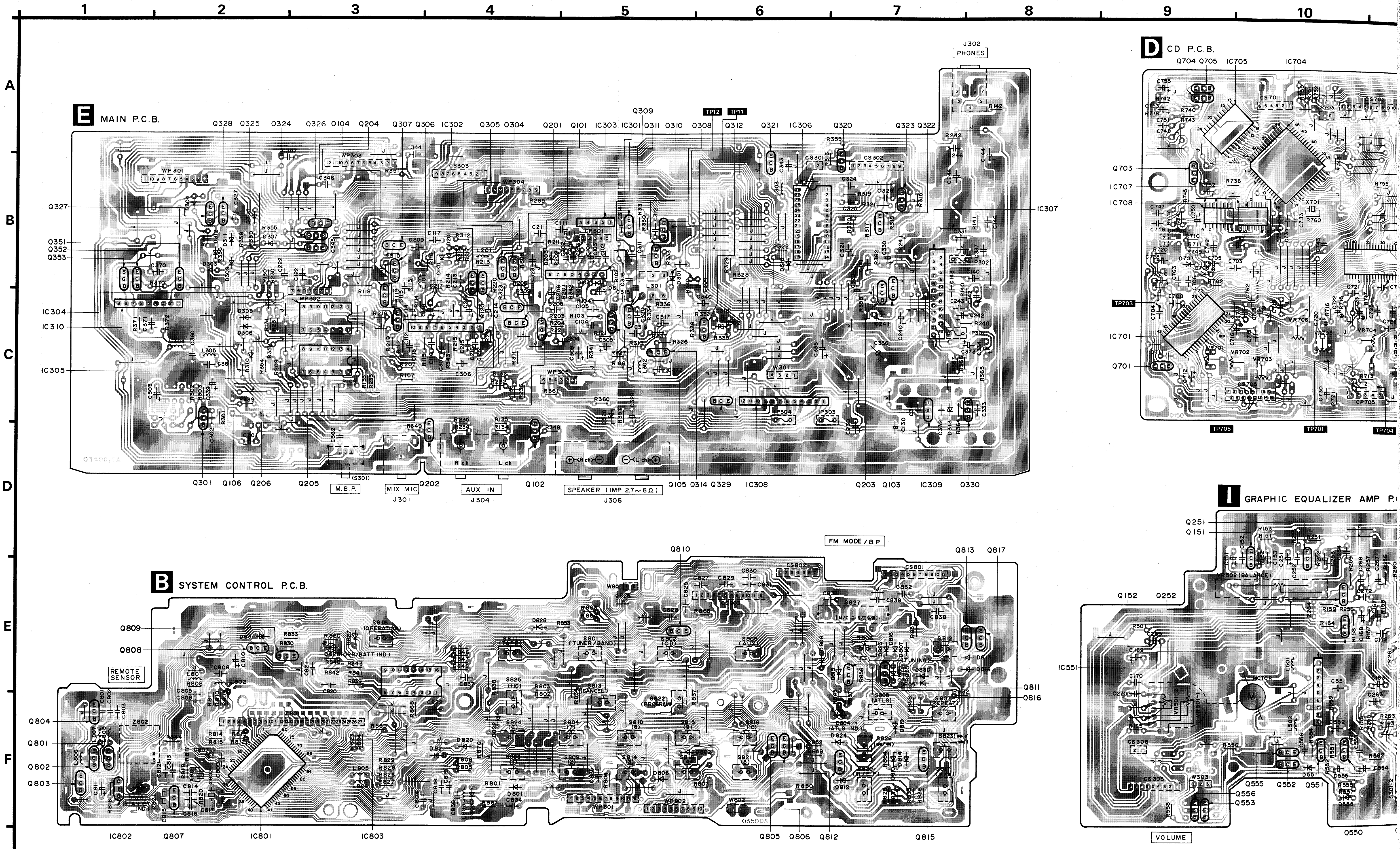
11
12
13
14
15
16
17
R ch
Q104,204 RVTDTC143XST ATLS CONTROL
Q351 RVTDTA114EST ATLS CONTROL
Q353 2SJ40CTA MUTING
Q102,103,202,203 2SC1740SSTA MUTING
IC310
COMPARATOR
IC310 BA6137 COMPARATOR (ATLS)
ATLS LEVEL CONTROL
ATLS REC
Q352 RVTDTC143XST MUTING
To B SYSTEM CONTROL CIRCUIT (WB01) on page 20.
VR UP
VR DOWN
CS306
Q550
Q551
Q550,551 2SC1740SRTA LED DRIVE
Q552
Q553
Q556
Q555
IC551
DIRECTION SELECTOR
DRIVE
IC551 BA6218 MOTOR DRIVE
Q552,555 RVTDTA114TST LED DRIVE
Q553,556 RVTDTC143XST LED DRIVE
IC501 RV1BA3822LS EQUALIZER AMP
IC501
BIAS
MOTOR
M
(100Hz)
(330Hz)
(1KHz)
(3.3KHz)
(10KHz)
(VOLUME)
(BALANCE)
Q151
Q251
Q151,251 2SC1740SLNRT BUFFER AMP
Q152
Q252
Q152,252 2SC1740SLNRT XBS AMP
S303-1
S303-2
ON
OFF
WP304
CS305
I GRAPHIC EQUALIZER AMP CIRCUIT
W303
J LED CIRCUIT
D552,554 SLT25VR124
D554 (DOWN)
D552 (UP)
Q324~326 RVTDTA114EST SWITCHING (CD/AUX/TAPE)
Q327 RVTDTA114EST MUTING CONT.
Q328 RVTDTC143XST MUTING CONT.
Q327
Q328
Q324
Q325
Q326
IC308 BA3920 POWER SUPPLY CONTROL
IC308
Q329 2SB1311Q POWER SUPPLY
Q329
IC307
REGULATOR /RIPPLE FILTER
MUTE IN
STD BY
VREF
IC307 AN7134N POWER AMP
R ch CERAMIC SPEAKER (TWEETER) 2cm
PM DYNAMIC SPEAKER (WOOFER) 16cm, 2.7Ω
L ch PM DYNAMIC SPEAKER (WOOFER) 16cm, 2.7Ω
CERAMIC SPEAKER (TWEETER) 2cm
J306
J302 HEADPHONES (32Ω ♯35)
IC309
IC309 S81250HGT REGULATOR
Q330
Q330 2SC1740SRTA REGULATOR
S301
W301
CS304
S302
AC
DC
F301 T3.15A
T301
L306 22μH
L307 22μH
J303 AC IN (220V···(E,EG) 240V···(EB)) 50Hz
J305 DC IN 13.2V (12~15V)
W302
D316 MA723TA
(MAIN) BATTERY 10 UM-1 BATTERIES ═ 15V (R20P/LR20 OR EQUIVALENT)
(BACK-UP FOR MEMORY) BATTERY 4 UM-3 BATTERIES ═ 6V (R6P/LR6 OR EQUIVALENT)
H POWER SUPPLY CIRCUIT
To A TUNER CIRCUIT (WP2) on page 14.
GND
CS307
WP301
D3 D2 D1 D0 REC H FWD AF MUTE AC B-UP B.PE B.P1
To B SYSTEM CONTROL CIRCUIT (CS801) on page 20.
WP303
CD L AUX L RAD H TAP L GND Vcc PWR/BATT B.UP4.9V PWR/CTRL MAIN M.B.P.
To B SYSTEM CONTROL CIRCUIT (CS803) on page 20.

■PRINTED CIRCUIT BOARDS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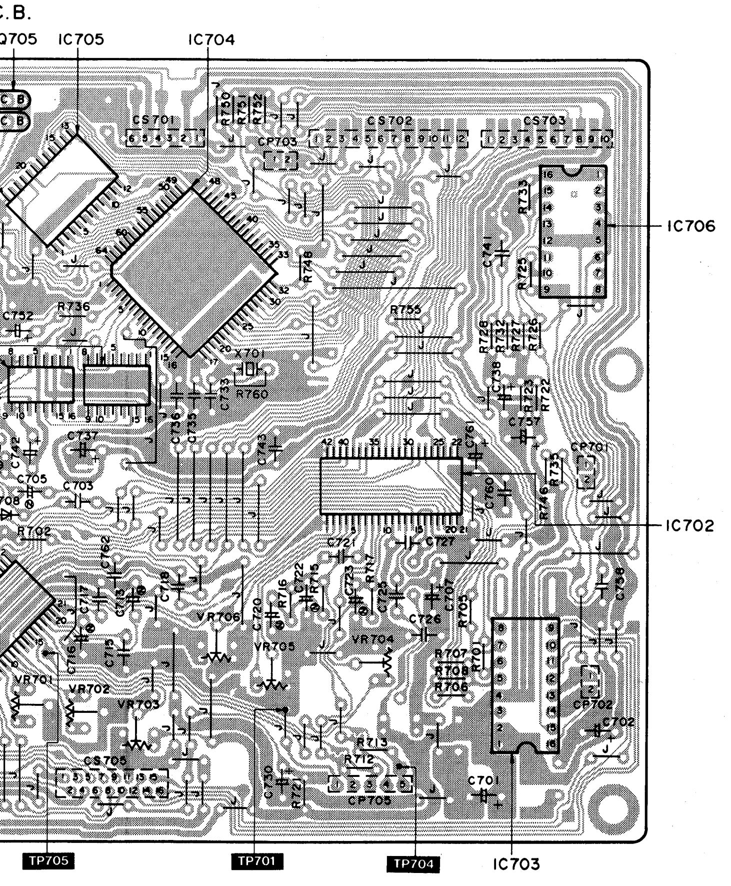
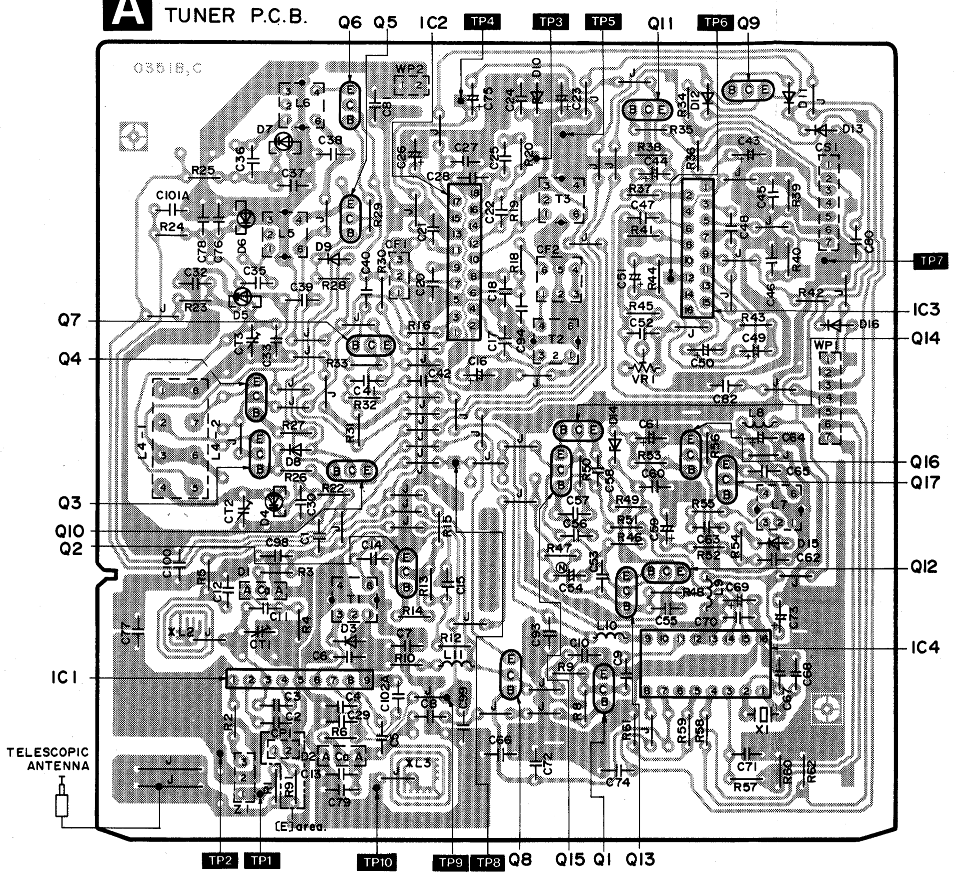
6
7
8
9
10
A
B
C
D
E
F
E MAIN P.C.B.
D CD P.C.B.
B SYSTEM CONTROL P.C.B.
I GRAPHIC EQUALIZER AMP P.C
J302
PHONES
TP12
TP11
TP703
TP705
TP701
TP704
M.B.P.
(S301)
MIX MIC
J301
AUX IN
J304
R ch
L ch
SPEAKER (IMP 2.7~8Ω)
J306
03490,EA
FM MODE / B.P
REMOTE SENSOR
S816 (OPERATION)
D826 (OPR/BATT.IND.)
S811 (TAPE)
S801 (TUNER/BAND)
S802 (CD)
S805 (AUX)
S813 (CANCEL)
S822 (PROGRAM)
S807 (REPEAT)
S808 (ATLS)
D804 (ATLS IND.)
D825 (STANDBY IND.)
G3500A
VR502 (BALANCE)
VR501-1
VR501-2
MOTOR
M
VOLUME
IC801
IC802
IC803
IC551
Q150

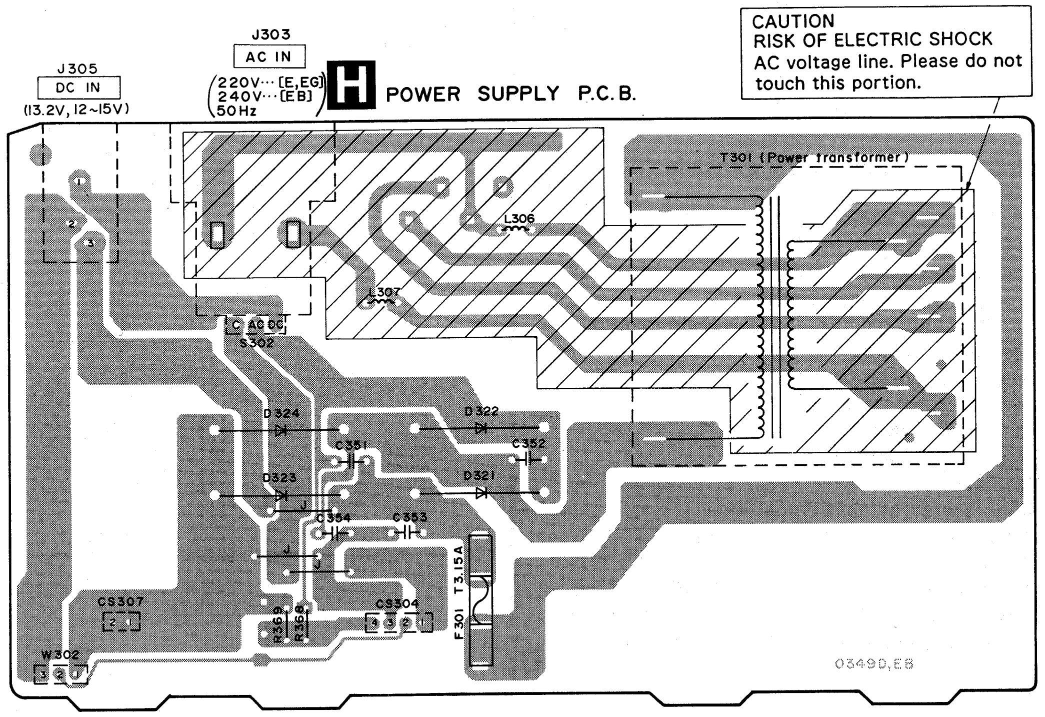
10 11 12 13 14 15 16 17 18 19


IC705
IC704
CS701
CS702
CS703
IC706
IC702
IC703
CP701
CP702
CP703
CS705
X701
VR701
VR702
VR703
VR704
VR705
VR706
TP705
TP701
TP704

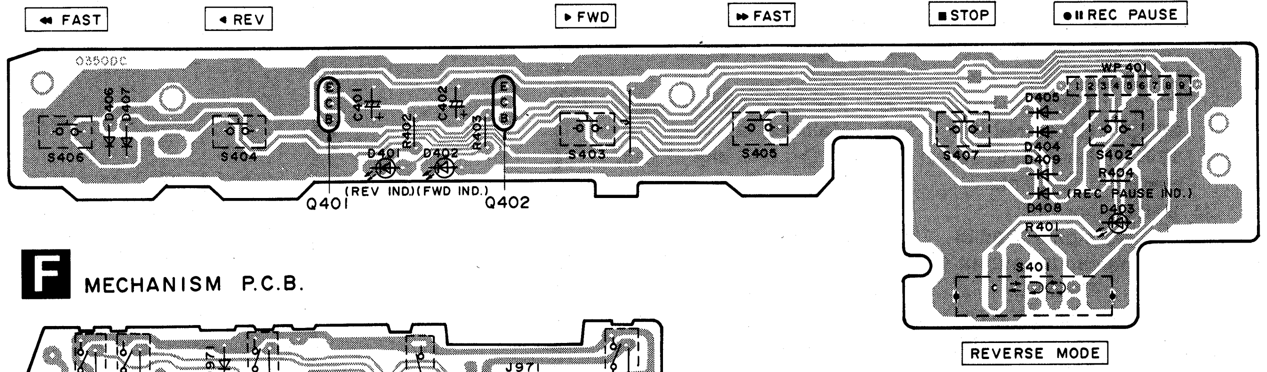
A TUNER P.C.B.


Q6 Q5 IC2 TP4 TP3 TP5 Q11 TP6 Q9
0351B,C
WP2
TP7
Q7
Q4
Q3
Q10
Q2
IC1
IC3
Q14
Q16
Q17
Q12
IC4
TELESCOPIC ANTENNA
[E] area.
TP2 TP1 TP10 TP9 TP8 Q8 Q15 Q1 Q13
CF1
CF2
T1
T2
T3
L1
L2
L3
L4
L5
L6
L8
L10
X1
VR1
WP1

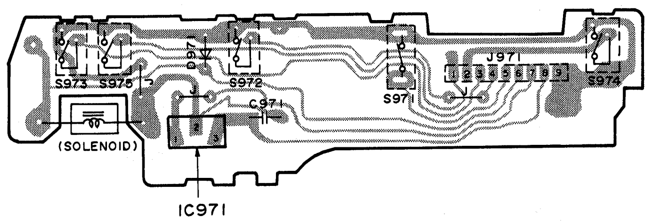
H POWER SUPPLY P.C.B.


J305
DC IN
(13.2V, 12~15V)
J303
AC IN
220V… [E, EG]
240V… [EB]
50Hz
CAUTION
RISK OF ELECTRIC SHOCK
AC voltage line. Please do not
touch this portion.
T301 (Power transformer)
L306
L307
AC DC
S302
D324
D322
D323
D321
C351
C352
C353
C354
CS307
CS304
F301 T3.15A
W302
0349D,EB

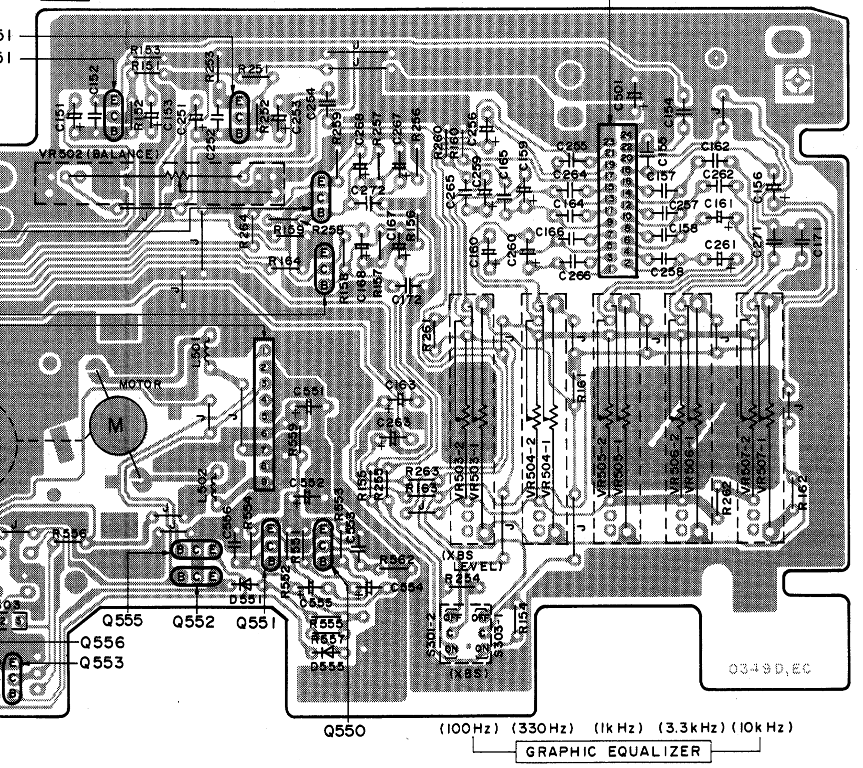
G DECK CONTROL SWITCH P.C.B.

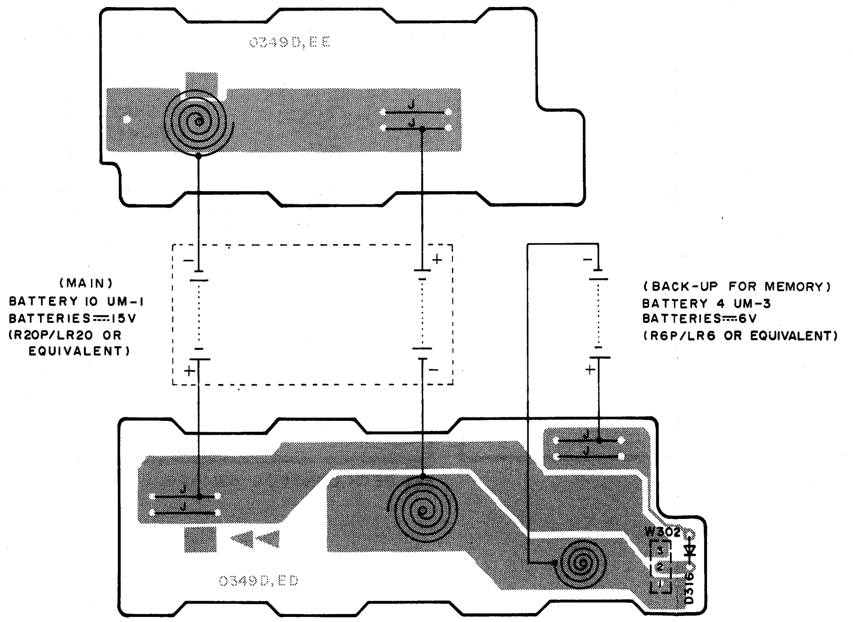

◂◂ FAST
◂ REV
▸ FWD
▸▸ FAST
■ STOP
●II REC PAUSE
0350DC
WP401
S406
S404
S403
S405
S407
S402
S401
D405
D406
D407
D404
D409
D408
D401
D402
D403
R401
R402
R403
R404
C401
C402
Q401
Q402
(REV IND.)(FWD IND.)
(REC PAUSE IND.)
REVERSE MODE

F MECHANISM P.C.B.


S973
S976
S972
S971
S974
J971
C971
D971
(SOLENOID)
IC971

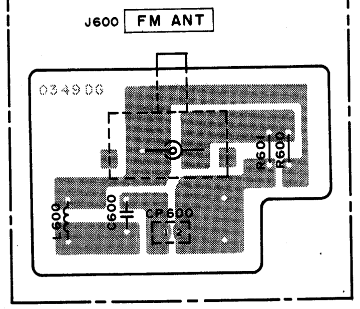
I GRAPHIC EQUALIZER AMP P.C.B.


IC501
VR502 (BALANCE)
MOTOR
M
VR503-1
VR503-2
VR504-1
VR504-2
VR505-1
VR505-2
VR506-1
VR506-2
VR507-1
VR507-2
(XBS LEVEL)
(XBS)
Q555
Q552
Q551
Q556
Q553
Q550
D551
0349D,EC
(100Hz) (330Hz) (1kHz) (3.3kHz) (10kHz)
GRAPHIC EQUALIZER

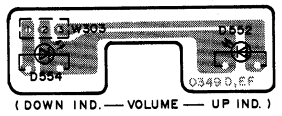

0349D,EE
(MAIN)
BATTERY 10 UM-1
BATTERIES ⎓15V
(R20P/LR20 OR
EQUIVALENT)
(BACK-UP FOR MEMORY)
BATTERY 4 UM-3
BATTERIES ⎓6V
(R6P/LR6 OR EQUIVALENT)
0349D,ED
W302
D316

For [E] area.

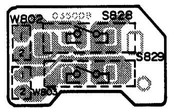
K ANTENNA P.C.B.


J600 FM ANT
0349DG
L600
C600
CP600
R601
R602

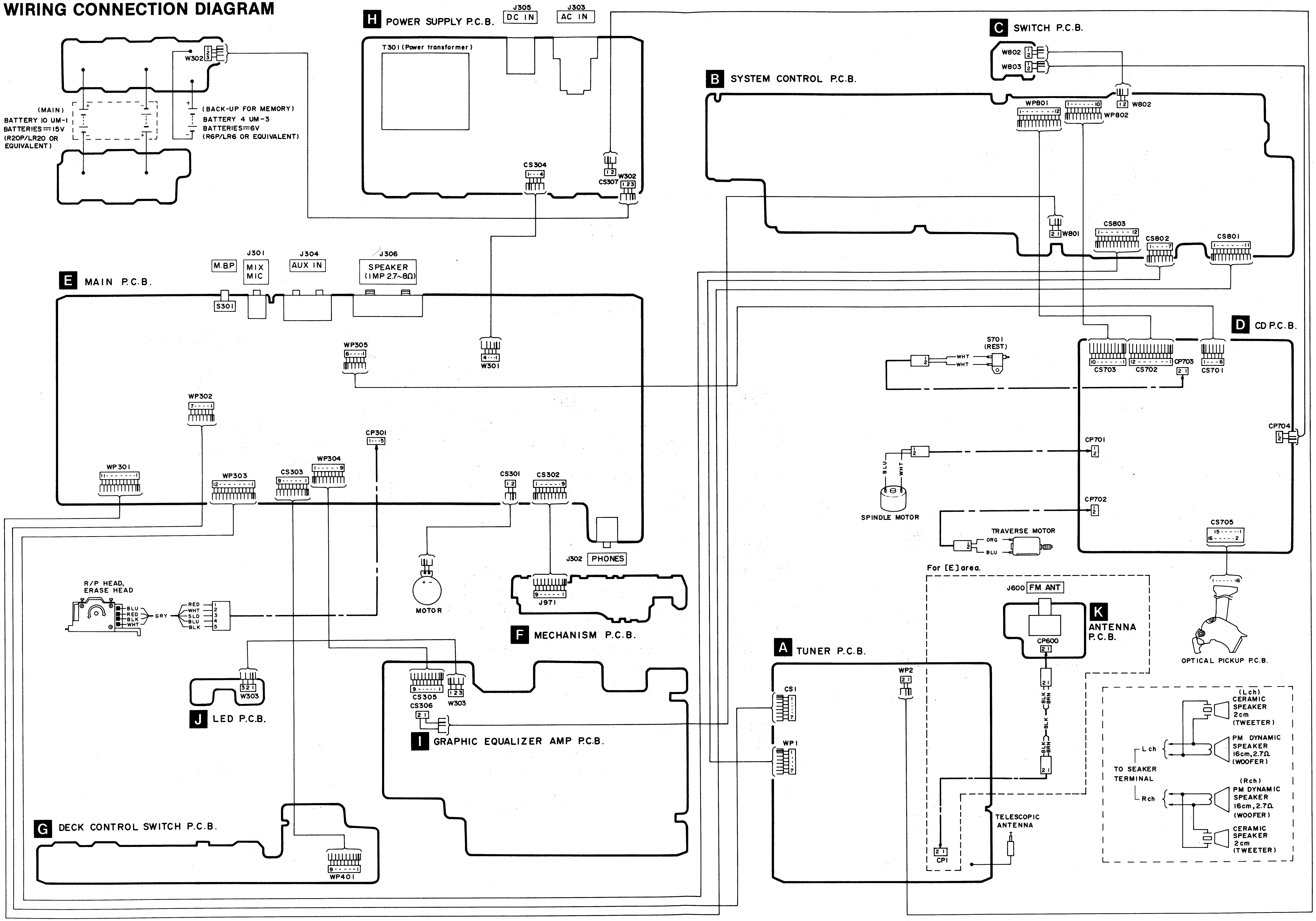
J LED P.C.B.


W303
D552
D554
0349D,EF
(DOWN IND. — VOLUME — UP IND.)

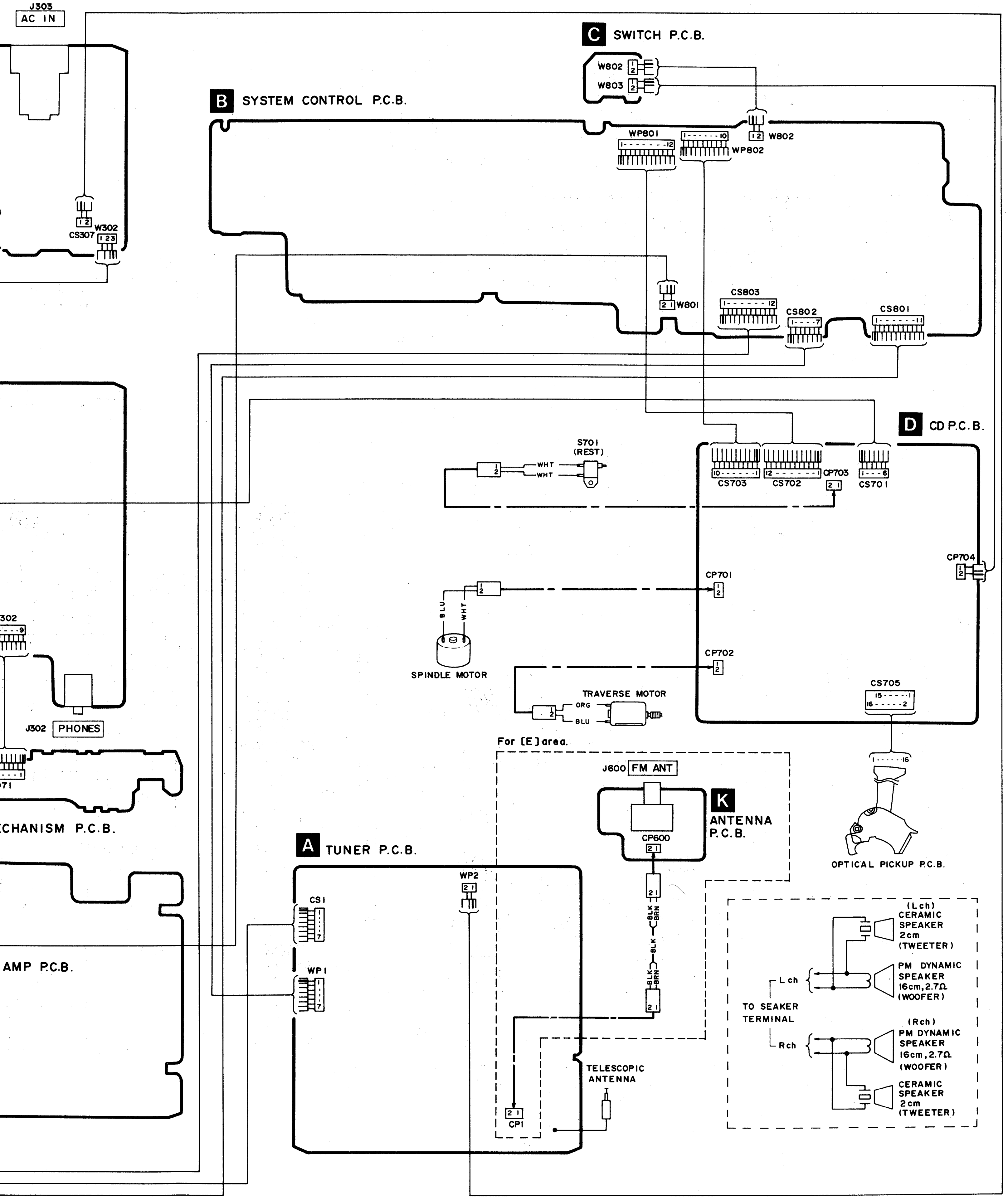
C SWITCH P.C.B.


W802
S828
S829

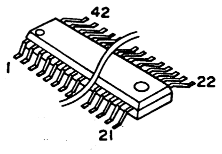
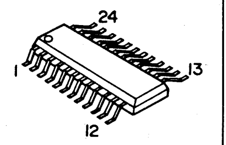
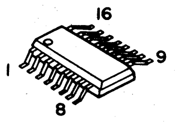
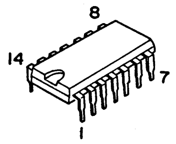
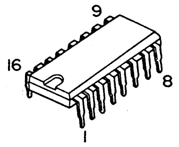
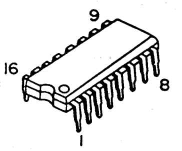
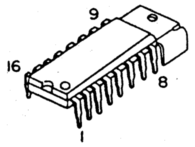
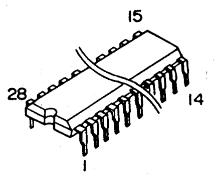
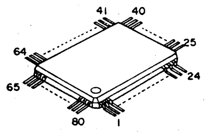
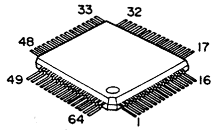
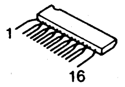
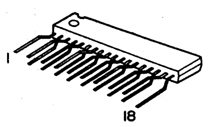
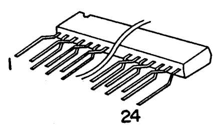
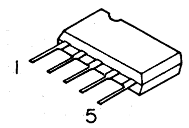
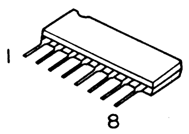
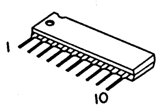
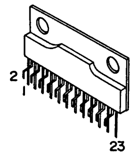
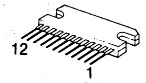
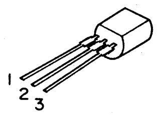
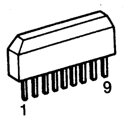
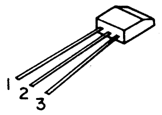
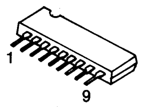
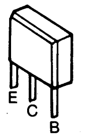
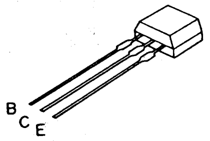
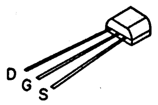
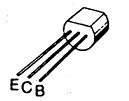
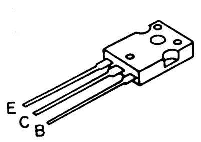
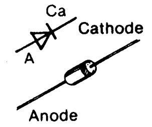
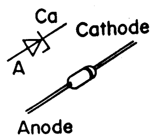
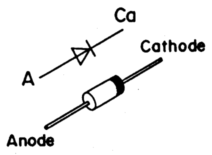
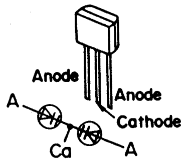
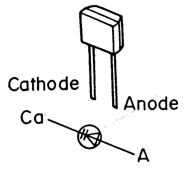
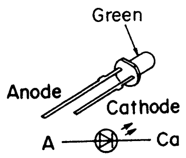
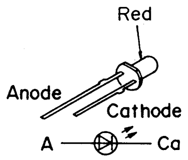
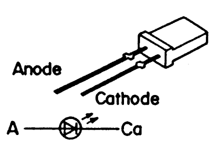
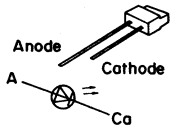
■ WIRING CONNECTION DIAGRAM



W302
(MAIN)
BATTERY 10 UM-1
BATTERIES ⎓ 15V
(R20P/LR20 OR EQUIVALENT)
(BACK-UP FOR MEMORY)
BATTERY 4 UM-3
BATTERIES ⎓ 6V
(R6P/LR6 OR EQUIVALENT)
H POWER SUPPLY P.C.B.
J305 DC IN
J303 AC IN
T301 (Power transformer)
CS304
CS307
W302
C SWITCH P.C.B.
W802
W803
B SYSTEM CONTROL P.C.B.
WP801
WP802
W802
W801
CS803
CS802
CS801
E MAIN P.C.B.
M.B.P
J301 MIX MIC
J304 AUX IN
J306 SPEAKER (IMP 2.7~8Ω)
S301
WP305
W301
WP302
CP301
WP301
WP303
CS303
WP304
CS301
CS302
J302 PHONES
MOTOR
R/P HEAD, ERASE HEAD
BLU
RED
BLK
WHT
GRY
RED
WHT
SLD
BLU
BLK
J971
F MECHANISM P.C.B.
W303
J LED P.C.B.
CS305
CS306
W303
I GRAPHIC EQUALIZER AMP P.C.B.
G DECK CONTROL SWITCH P.C.B.
WP401
S701 (REST)
WHT
WHT
D CD P.C.B.
CS703
CS702
CP703
CS701
CP704
CP701
BLU
WHT
SPINDLE MOTOR
CP702
TRAVERSE MOTOR
ORG
BLU
CS705
OPTICAL PICKUP P.C.B.
For [E] area.
J600 FM ANT
K ANTENNA P.C.B.
CP600
BLK
BRN
BLK
BLK
BRN
A TUNER P.C.B.
WP2
CS1
WP1
CP1
TELESCOPIC ANTENNA
TO SEAKER TERMINAL
Lch
Rch
(Lch) CERAMIC SPEAKER 2cm (TWEETER)
PM DYNAMIC SPEAKER 16cm, 2.7Ω (WOOFER)
(Rch) PM DYNAMIC SPEAKER 16cm, 2.7Ω (WOOFER)
CERAMIC SPEAKER 2cm (TWEETER)


J303
AC IN
CS307
W302
B SYSTEM CONTROL P.C.B.
C SWITCH P.C.B.
W802
W803
WP801
WP802
W801
CS803
CS802
CS801
D CD P.C.B.
S701 (REST)
WHT
CS703
CS702
CP703
CS701
CP704
CP701
BLU
SPINDLE MOTOR
CP702
TRAVERSE MOTOR
ORG
CS705
OPTICAL PICKUP P.C.B.
J302 PHONES
CHANISM P.C.B.
For [E] area.
J600 FM ANT
K ANTENNA P.C.B.
CP600
BLK
BRN
A TUNER P.C.B.
WP2
CS1
WP1
CP1
TELESCOPIC ANTENNA
AMP P.C.B.
TO SEAKER TERMINAL
Lch
Rch
(Lch) CERAMIC SPEAKER 2cm (TWEETER)
PM DYNAMIC SPEAKER 16cm, 2.7Ω (WOOFER)
(Rch) PM DYNAMIC SPEAKER 16cm, 2.7Ω (WOOFER)
CERAMIC SPEAKER 2cm (TWEETER)

TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

AN8373SE2 AN8374SE2 	**LC3517BMLTP** 	**SM5807ESE2 UPD6376GSE2** 	**BU4066B** 	**M50253P** 
LM7001 TA8410P 	**AN8377N** 	**TC9312AN-082** 	**M50932-179FP** 	**MN6625** 
RVIBA1332L 	**RVIBA4236L** 	**RVIBA3822LS** 	**BA7755** 	**BA15218N-DX** 
BA3310N 	**AN7134N** 	**BA3920** 	**S8054HN-T S81250HGT** 	**RVITA7358P** 
DN6851A 	**BA6137 BA6218** 	**2SA1309STA UN4110TA UN4216TA** 		**RVTDTA114TST RVTDTC114EST RVTDTA114EST RVTDTC114TST RVTDTA143XST RVTDTC143XST 2SC1740SLNRT 2SC1740SQTA 2SC1740SSTA 2SC1740SRTA**
2SJ40CTA 		**2SA720S 2SB621RTA 2SC829BTA 2SC1047CTA 2SC1684HS 2SC1684RTA 2SC2001K1TA 2SC2001L1TA**	**2SB1311Q** 	**MA165TA MA723TA RVD1SS133TA** 
		**RVDMTZ5R6BTA RVDMTZ6R8BTA RVDMTZ7R5BTA RVDMTZ10BTA RVDMTZ11BTA**	**RVDP300DLF** 	**1SV147T4MATU** 
RVDSVC321 	**SLR33MC160** 	**SLR33VC160** 	**SL25VR70F155** 	**SLT25VR124** 

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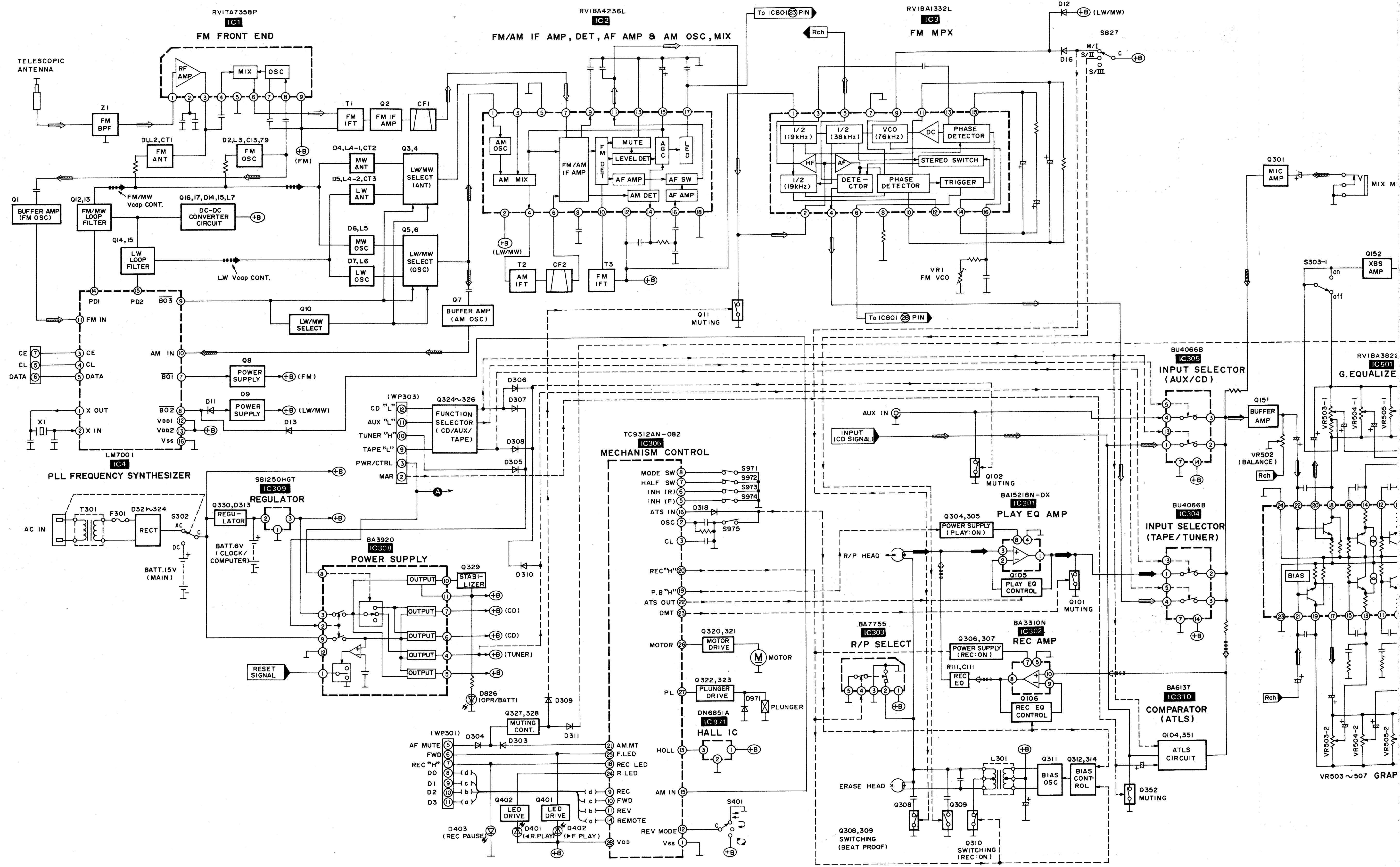
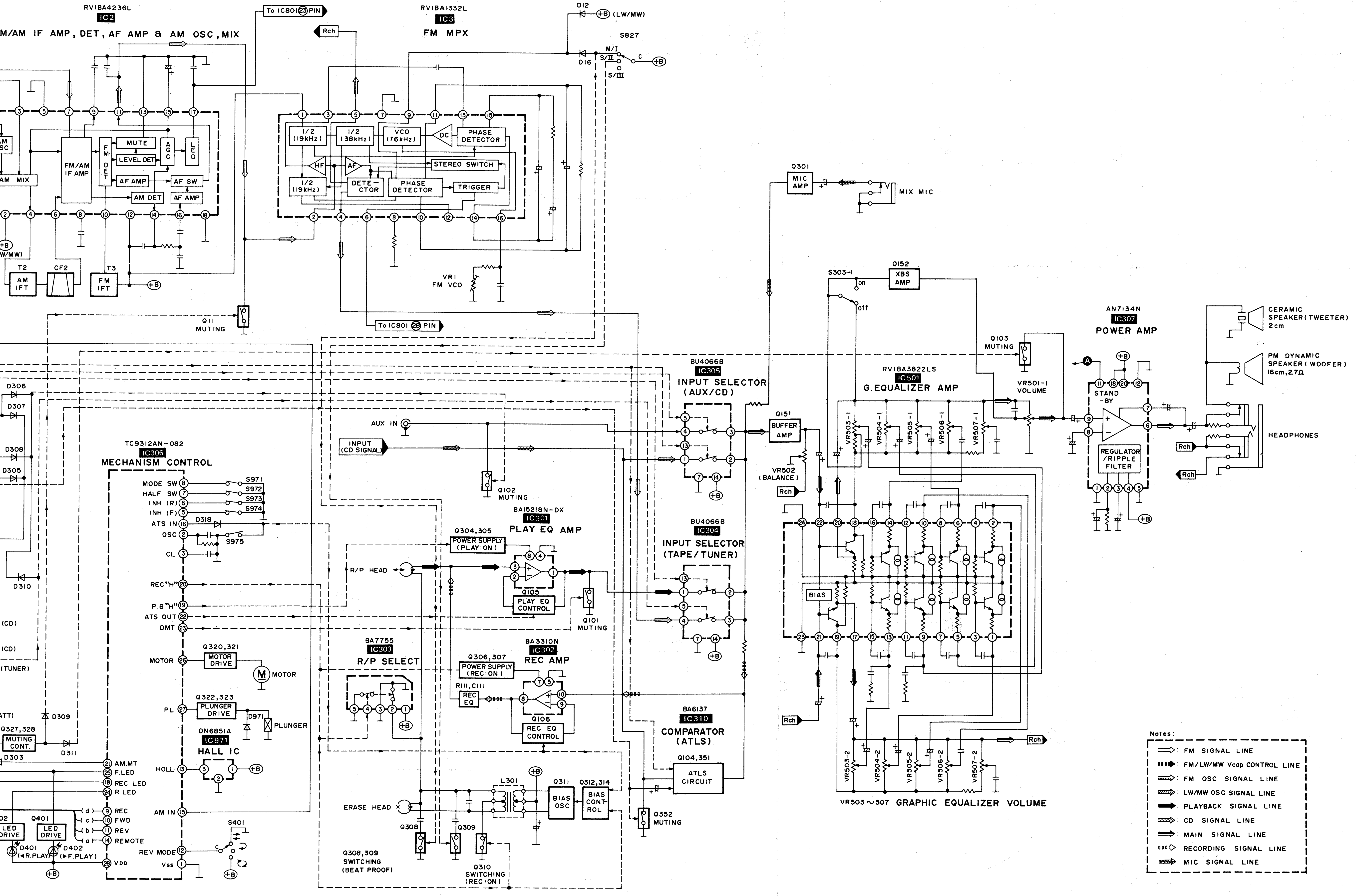
18
1
24
1
5
1
8
1
10
2
1
23
12
1
1
2
3
1
9
1
2
3
1
9
E
C
B
B
C
E
D
G
S
E C B
E
C
B
Ca
Cathode
A
Anode
Ca
Cathode
A
Anode
Ca
Cathode
A
Anode
Anode
Anode
A
Cathode
Ca
A
Cathode
Anode
Ca
A
Green
Anode
Cathode
A
Ca
Red
Anode
Cathode
A
Ca
Anode
Cathode
A
Ca
Anode
Cathode
A
Ca

■ BLOCK DIAGRAM (for Tuner, Main, Graphic Equalizer and Mechanism Section)


RVITA7358P
IC1
FM FRONT END
RF AMP
MIX
OSC
TELESCOPIC ANTENNA
Z1
FM BPF
D1,L2,CT1
FM ANT
D2,L3,C13,79
FM OSC
(FM)
T1
FM IFT
Q2
FM IF AMP
CF1
RV1BA4236L
IC2
FM/AM IF AMP, DET, AF AMP & AM OSC, MIX
AM OSC
AM MIX
FM/AM IF AMP
FM DET
MUTE
LEVEL DET
AGC
LED
AF AMP
AF SW
AM DET
AF AMP
(LW/MW)
T2
AM IFT
CF2
T3
FM IFT
To IC801 23 PIN
Rch
RV1BA1332L
IC3
FM MPX
1/2 (19kHz)
1/2 (38kHz)
VCO (76kHz)
DC
PHASE DETECTOR
HF
AF
STEREO SWITCH
1/2 (19kHz)
DETECTOR
PHASE DETECTOR
TRIGGER
VR1
FM VCO
To IC801 26 PIN
D12
(LW/MW)
S827
M/I
S/II
S/III
D16
Q1
BUFFER AMP (FM OSC)
Q12,13
FM/MW LOOP FILTER
FM/MW Vcap CONT.
Q16,17,D14,15,L7
DC-DC CONVERTER CIRCUIT
Q14,15
LW LOOP FILTER
LW Vcap CONT.
D4,L4-1,CT2
MW ANT
D5,L4-2,CT3
LW ANT
Q3,4
LW/MW SELECT (ANT)
D6,L5
MW OSC
D7,L6
LW OSC
Q5,6
LW/MW SELECT (OSC)
Q7
BUFFER AMP (AM OSC)
Q10
LW/MW SELECT
Q11
MUTING
PD1
PD2
BO3
FM IN
CE
CL
DATA
AM IN
Q8
POWER SUPPLY
BO1
(FM)
Q9
POWER SUPPLY
D11
BO2
VDD1
VDD2
Vss
(LW/MW)
D13
X OUT
X IN
X1
LM7001
IC4
PLL FREQUENCY SYNTHESIZER
AC IN
T301
F301
D321~324
RECT
S302
AC
DC
BATT.15V (MAIN)
S81250HGT
IC309
REGULATOR
Q330,D313
REGULATOR
BATT.6V (CLOCK/COMPUTER)
BA3920
IC308
POWER SUPPLY
OUTPUT
Q329
STABILIZER
(CD)
(CD)
(TUNER)
RESET SIGNAL
D826 (OPR/BATT)
(WP303)
CD "L"
AUX "L"
TUNER "H"
TAPE "L"
PWR/CTRL
MAR
Q324~326
FUNCTION SELECTOR (CD/AUX/TAPE)
D306
D307
D308
D305
D310
D309
A
TC9312AN-082
IC306
MECHANISM CONTROL
MODE SW
HALF SW
INH (R)
INH (F)
ATS IN
OSC
CL
S971
S972
S973
S974
D318
S975
REC "H"
P.B "H"
ATS OUT
DMT
MOTOR
Q320,321
MOTOR DRIVE
MOTOR
PL
Q322,323
PLUNGER DRIVE
D971
PLUNGER
DN6851A
IC971
HALL IC
HOLL
AM IN
S401
REV MODE
Vss
Q327,328
MUTING CONT.
(WP301)
AF MUTE
FWD
REC "H"
D0
D1
D2
D3
D304
D303
D311
AM.MT
F.LED
REC LED
R.LED
REC
FWD
REV
REMOTE
VDD
Q402
LED DRIVE
Q401
LED DRIVE
D403 (REC PAUSE)
D401 (◄R.PLAY)
D402 (►F.PLAY)
AUX IN
INPUT (CD SIGNAL)
Q102
MUTING
BA15218N-DX
IC301
PLAY EQ AMP
Q304,305
POWER SUPPLY (PLAY:ON)
R/P HEAD
Q105
PLAY EQ CONTROL
Q101
MUTING
BA7755
IC303
R/P SELECT
BA3310N
IC302
REC AMP
Q306,307
POWER SUPPLY (REC:ON)
R111,C111
REC EQ
Q106
REC EQ CONTROL
ERASE HEAD
L301
Q311
BIAS OSC
Q312,314
BIAS CONTROL
Q308
Q309
Q310
SWITCHING (REC:ON)
Q308,309
SWITCHING (BEAT PROOF)
BU4066B
IC305
INPUT SELECTOR (AUX/CD)
BU4066B
IC304
INPUT SELECTOR (TAPE/TUNER)
BA6137
IC310
COMPARATOR (ATLS)
Q104,351
ATLS CIRCUIT
Q352
MUTING
Q301
MIC AMP
MIX
S303-1
on
off
Q152
XBS AMP
RV1BA3822
IC501
G.EQUALIZE
Q151
BUFFER AMP
VR502 (BALANCE)
Rch
BIAS
VR503-1
VR504-1
VR505-1
VR503-2
VR504-2
VR505-2
Rch
VR503~507 GRAP
+B

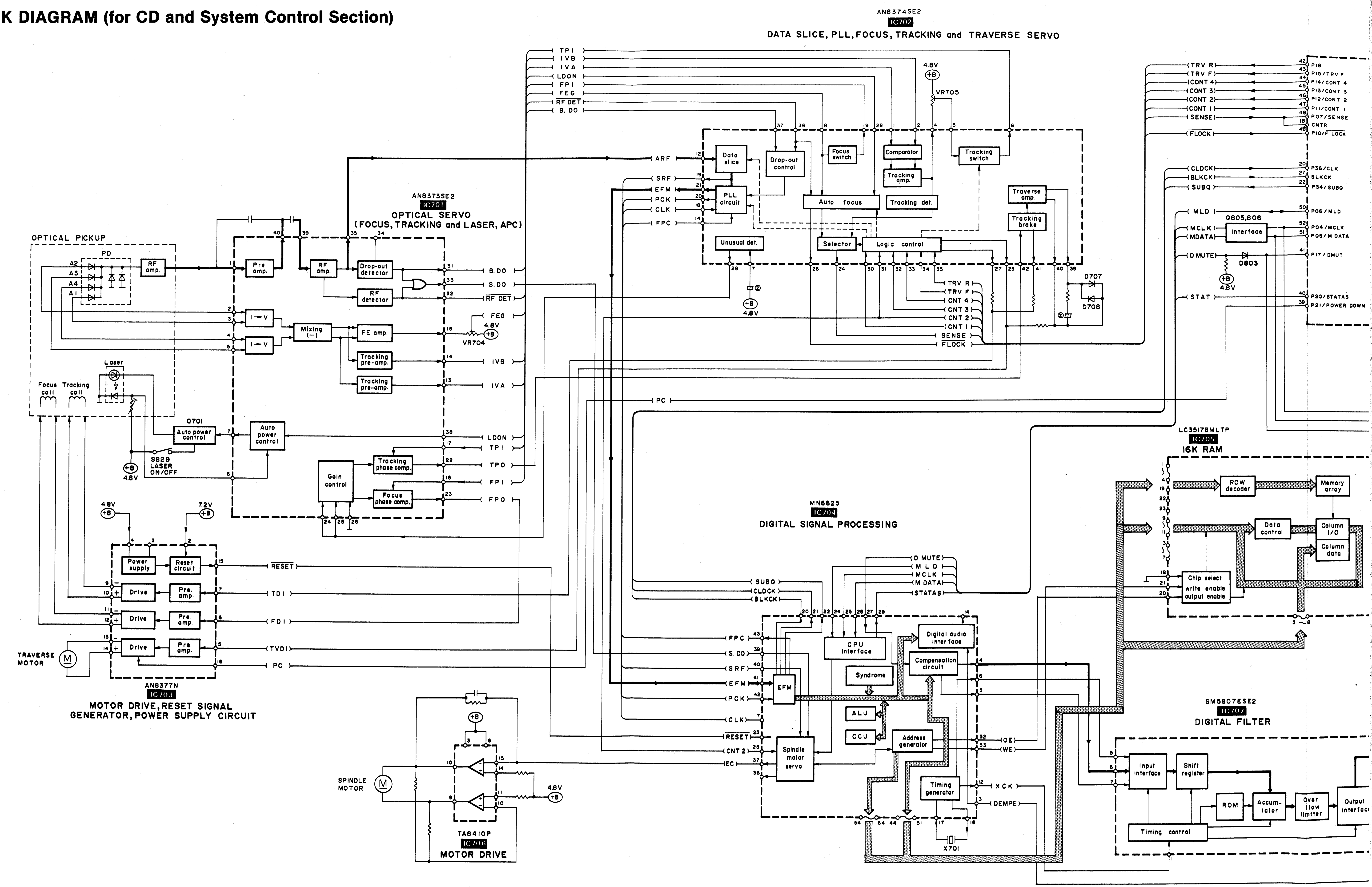
Section)


RV1BA4236L
IC2
M/AM IF AMP, DET, AF AMP & AM OSC, MIX
AM MIX
FM/AM IF AMP
FM DET
MUTE
LEVEL DET
AGC
LED
AF AMP
AF SW
AM DET
AF AMP
(LW/MW)
T2
AM IFT
CF2
T3
FM IFT
To IC801 ㉓ PIN
Q11 MUTING
RV1BA1332L
IC3
FM MPX
Rch
1/2 (19kHz)
1/2 (38kHz)
VCO (76kHz)
DC
PHASE DETECTOR
HF
AF
STEREO SWITCH
1/2 (19kHz)
DETECTOR
PHASE DETECTOR
TRIGGER
VR1 FM VCO
To IC801 ㉘ PIN
D12
(LW/MW)
S827
M/I
S/II
S/III
C
D16
Q301
MIC AMP
MIX MIC
S303-1
on
off
Q152
XBS AMP
D306
D307
D308
D305
D310
(CD)
(CD)
(TUNER)
ATT)
D309
Q327,328
MUTING CONT.
D311
D303
Q401
LED DRIVE
LED DRIVE
D401 (◀R.PLAY)
D402 (▶F.PLAY)
TC9312AN-082
IC306
MECHANISM CONTROL
MODE SW
HALF SW
INH (R)
INH (F)
ATS IN
OSC
CL
D318
S971
S972
S973
S974
S975
REC"H"
P.B"H"
ATS OUT
DMT
MOTOR
Q320,321
MOTOR DRIVE
MOTOR
PL
Q322,323
PLUNGER DRIVE
D971
PLUNGER
DN6851A
IC971
HALL IC
HOLL
AM.MT
F.LED
REC LED
R.LED
AM IN
REC
FWD
REV
REMOTE
REV MODE
VDD
Vss
S401
AUX IN
INPUT (CD SIGNAL)
Q102 MUTING
BA15218N-DX
IC301
PLAY EQ AMP
Q304,305
POWER SUPPLY (PLAY:ON)
R/P HEAD
Q105
PLAY EQ CONTROL
Q101 MUTING
BA7755
IC303
R/P SELECT
Q306,307
POWER SUPPLY (REC:ON)
BA3310N
IC302
REC AMP
R111,C111
REC EQ
Q106
REC EQ CONTROL
ERASE HEAD
L301
Q311
BIAS OSC
Q312,314
BIAS CONTROL
Q308
Q309
Q310 SWITCHING (REC:ON)
Q308,309 SWITCHING (BEAT PROOF)
Q352 MUTING
BU4066B
IC305
INPUT SELECTOR (AUX/CD)
BU4066B
IC304
INPUT SELECTOR (TAPE/TUNER)
BA6137
IC310
COMPARATOR (ATLS)
Q104,351
ATLS CIRCUIT
Q151
BUFFER AMP
VR502 (BALANCE)
Rch
RV1BA3822LS
IC501
G.EQUALIZER AMP
VR503-1
VR504-1
VR505-1
VR506-1
VR507-1
BIAS
VR503-2
VR504-2
VR505-2
VR506-2
VR507-2
VR503~507 GRAPHIC EQUALIZER VOLUME
Q103 MUTING
VR501-1 VOLUME
AN7134N
IC307
POWER AMP
STAND-BY
REGULATOR /RIPPLE FILTER
CERAMIC SPEAKER (TWEETER) 2cm
PM DYNAMIC SPEAKER (WOOFER) 16cm, 2.7Ω
HEADPHONES
Rch
Rch
A
+B

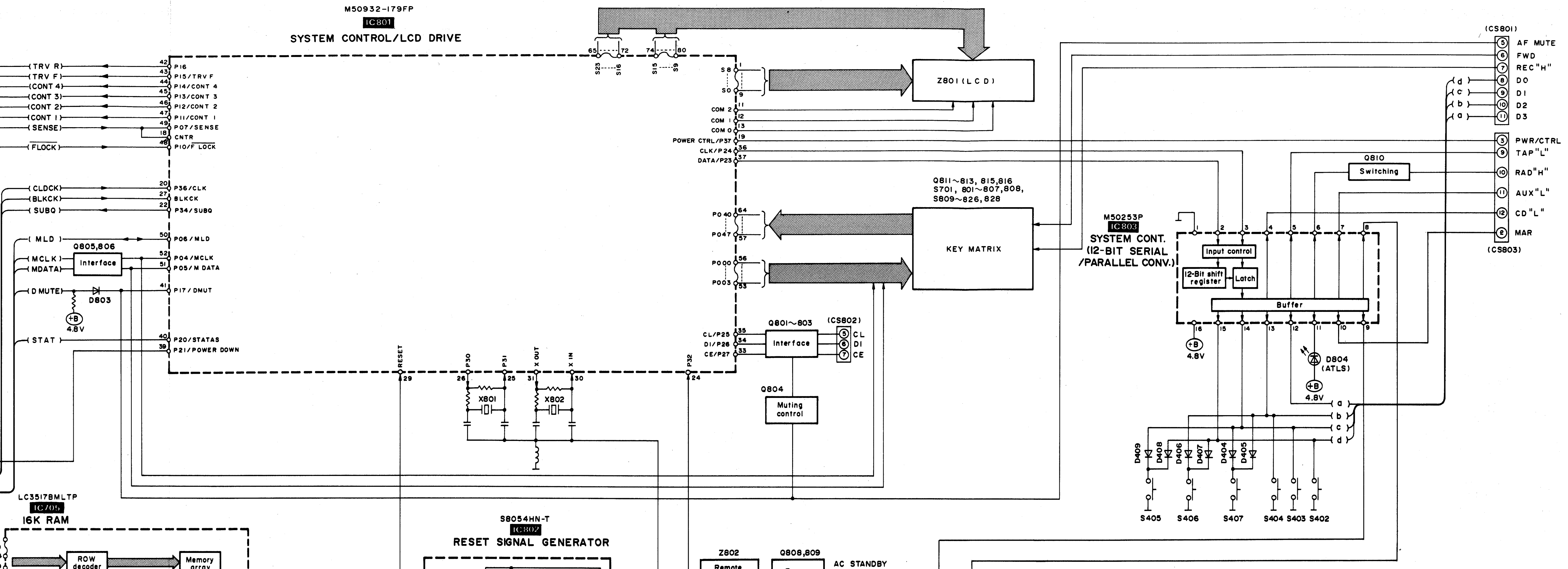
Notes:

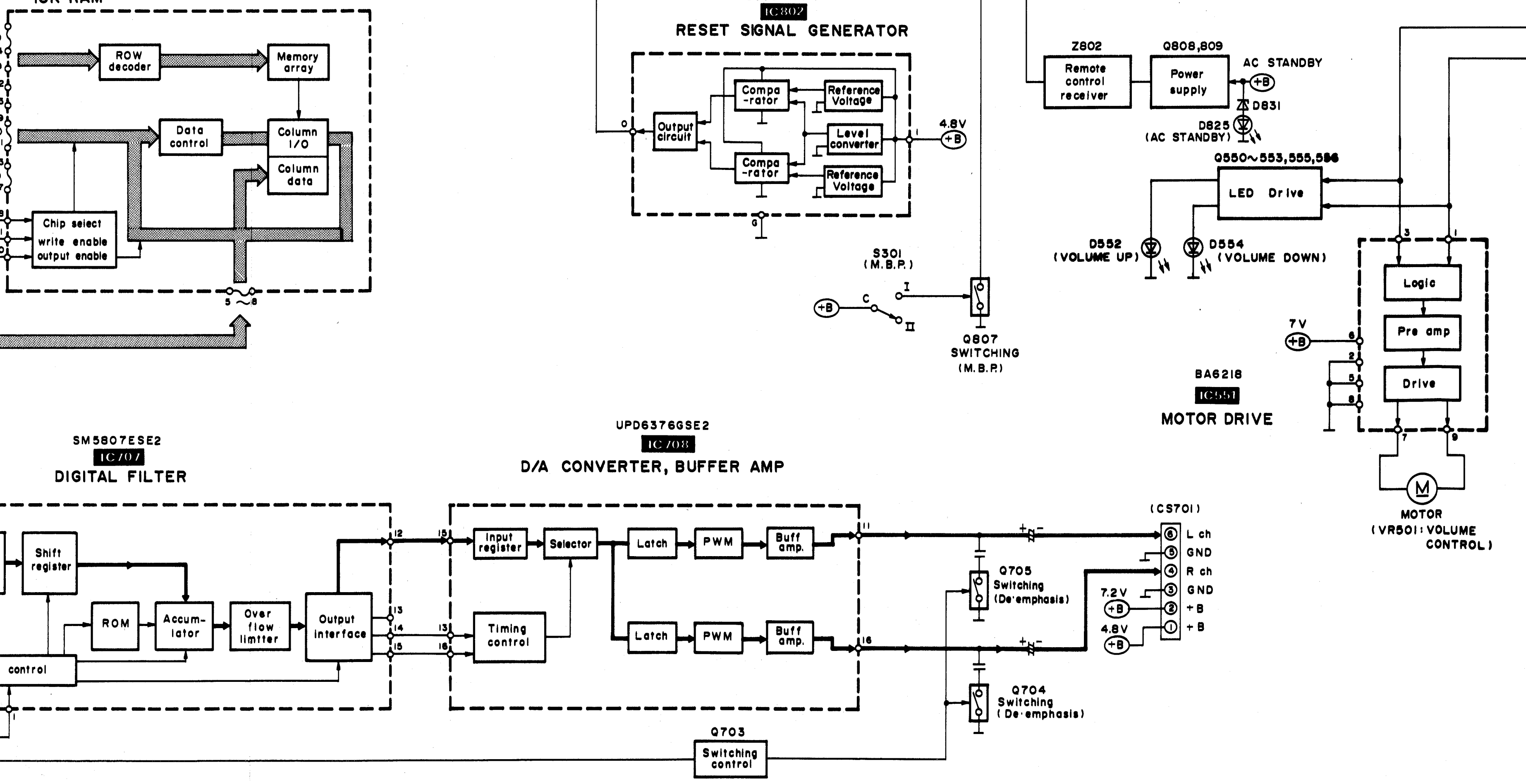
- ⇨: FM SIGNAL LINE
- ▮▮▮➡: FM/LW/MW Vcap CONTROL LINE
- ➡: FM OSC SIGNAL LINE
- ▨➡: LW/MW OSC SIGNAL LINE
- ➡: PLAYBACK SIGNAL LINE
- ⇨: CD SIGNAL LINE
- ⇨: MAIN SIGNAL LINE
- ▯▯▯▷: RECORDING SIGNAL LINE
- ▨➡: MIC SIGNAL LINE

■ BLOCK DIAGRAM (for CD and System Control Section)



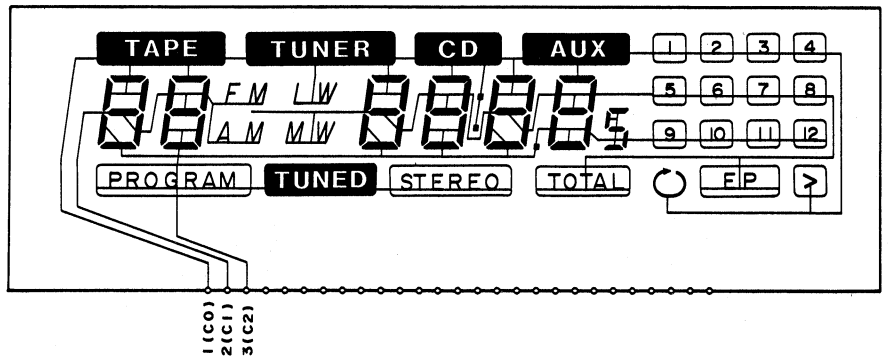
AN8374SE2
IC702
DATA SLICE, PLL, FOCUS, TRACKING and TRAVERSE SERVO
AN8373SE2
IC701
OPTICAL SERVO
(FOCUS, TRACKING and LASER, APC)
OPTICAL PICKUP
PD
A2
A3
A4
A1
RF amp.
Laser
Focus coil
Tracking coil
Q701
Auto power control
S829 LASER ON/OFF
4.8V
Pre amp.
RF amp.
Drop-out detector
RF detector
I→V
Mixing (−)
FE amp.
Tracking pre-amp.
Auto power control
Gain control
Tracking phase comp.
Focus phase comp.
VR704
B. DO
S. DO
RF DET
FEG
IVB
IVA
LDON
TPI
TPO
FPI
FPO
TPI
IVB
IVA
LDON
FPI
FEG
RF DET
B. DO
ARF
SRF
EFM
PCK
CLK
FPC
PC
Data slice
Drop-out control
Focus switch
Comparator
Tracking amp.
Tracking switch
PLL circuit
Auto focus
Tracking det.
Traverse amp.
Tracking brake
Unusual det.
Selector
Logic control
VR705
4.8V
D707
D708
TRV R
TRV F
CNT 4
CNT 3
CNT 2
CNT 1
SENSE
FLOCK
TRV R
TRV F
CONT 4
CONT 3
CONT 2
CONT 1
SENSE
FLOCK
P16
P15/TRV F
P14/CONT 4
P13/CONT 3
P12/CONT 2
P11/CONT 1
P07/SENSE
CNTR
P10/F LOCK
CLDCK
BLKCK
SUBQ
P36/CLK
BLKCK
P34/SUBQ
MLD
Q805,806
MCLK
MDATA
Interface
P06/MLD
P04/MCLK
P05/M DATA
D MUTE
D803
4.8V
P17/DMUT
STAT
P20/STATAS
P21/POWER DOWN
LC3517BMLTP
IC705
16K RAM
ROW decoder
Memory array
Data control
Column I/O
Column data
Chip select write enable output enable
AN8377N
IC703
MOTOR DRIVE, RESET SIGNAL GENERATOR, POWER SUPPLY CIRCUIT
4.8V
7.2V
Power supply
Reset circuit
Drive
Pre. amp.
TRAVERSE MOTOR
RESET
TDI
FDI
TVDI
PC
SPINDLE MOTOR
TA8410P
IC706
MOTOR DRIVE
4.8V
MN6625
IC704
DIGITAL SIGNAL PROCESSING
D MUTE
M L D
MCLK
M DATA
STATAS
SUBQ
CLDCK
BLKCK
FPC
S. DO
SRF
EFM
PCK
CLK
RESET
CNT 2
EC
CPU interface
Digital audio interface
Compensation circuit
Syndrome
EFM
ALU
CCU
Spindle motor servo
Address generator
Timing generator
X701
OE
WE
XCK
DEMPE
SM5807ESE2
IC707
DIGITAL FILTER
Input interface
Shift register
ROM
Accumulator
Over flow limiter
Output interface
Timing control


M50932-179FP
IC801
SYSTEM CONTROL/LCD DRIVE
TRV R
TRV F
CONT 4
CONT 3
CONT 2
CONT 1
SENSE
FLOCK
P16
P15/TRV F
P14/CONT 4
P13/CONT 3
P12/CONT 2
P11/CONT 1
P07/SENSE
CNTR
P10/F LOCK
CLDCK
BLKCK
SUBQ
P36/CLK
BLKCK
P34/SUBQ
MLD
P06/MLD
Q805,806
Interface
MCLK
MDATA
P04/MCLK
P05/M DATA
D MUTE
D803
P17/DMUT
+B
4.8V
STAT
P20/STATAS
P21/POWER DOWN
RESET
P30
P31
X OUT
X IN
P32
X801
X802
S23
S16
S15
S9
Z801 (LCD)
S8
S0
COM 2
COM 1
COM 0
POWER CTRL/P37
CLK/P24
DATA/P23
Q811~813, 815,816
S701, 801~807,808,
S809~826, 828
KEY MATRIX
P0 40
P047
P000
P003
Q801~803
Interface
(CS802)
CL/P25
DI/P26
CE/P27
CL
DI
CE
Q804
Muting control
M50253P
IC803
SYSTEM CONT.
(12-BIT SERIAL
/PARALLEL CONV.)
Input control
12-Bit shift register
Latch
Buffer
+B
4.8V
Q810
Switching
D804
(ATLS)
+B
4.8V
(CS801)
AF MUTE
FWD
REC"H"
DO
DI
D2
D3
PWR/CTRL
TAP"L"
RAD"H"
AUX"L"
CD"L"
MAR
(CS803)
a
b
c
d
D409
D408
D406
D407
D404
D405
S405
S406
S407
S404
S403
S402
LC35178MLTP
IC705
16K RAM

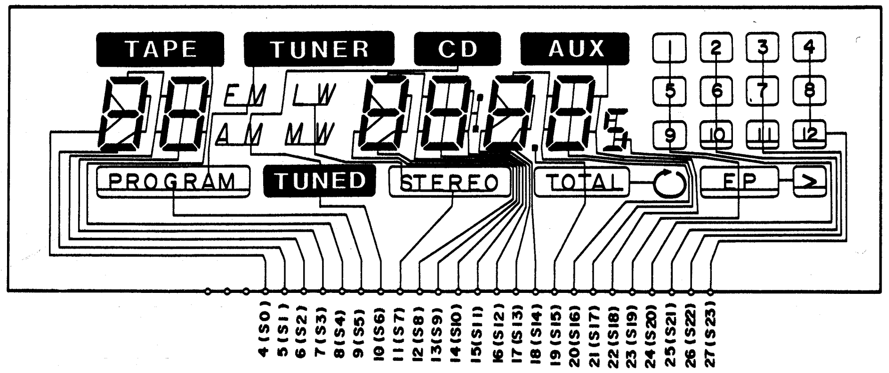

ROW decoder
Memory array
Data control
Column I/O
Column data
Chip select
write enable
output enable
5~8
S8054HN-T
IC802
RESET SIGNAL GENERATOR
Output circuit
Compa-rator
Reference Voltage
Level converter
Compa-rator
Reference Voltage
4.8V
+B
S301
(M.B.P.)
Q807
SWITCHING
(M.B.P.)
Z802
Remote control receiver
Q808,809
Power supply
AC STANDBY
+B
D831
D825
(AC STANDBY)
Q550~553,555,556
LED Drive
D552
(VOLUME UP)
D554
(VOLUME DOWN)
BA6218
IC551
MOTOR DRIVE
7V
+B
Logic
Pre amp
Drive
MOTOR
(VR501: VOLUME CONTROL)
SM5807ESE2
IC707
DIGITAL FILTER
Shift register
ROM
Accum-ulator
Over flow limiter
Output interface
control
UPD6376GSE2
IC708
D/A CONVERTER, BUFFER AMP
Input register
Selector
Latch
PWM
Buff amp.
Timing control
Latch
PWM
Buff amp.
Q705
Switching
(De-emphasis)
Q704
Switching
(De-emphasis)
Q703
Switching control
(CS701)
L ch
GND
R ch
GND
+B
+B
7.2V
4.8V

■ INTERNAL CONNECTIONS OF LCD (Liquid Crystal Display)

COMMON


TAPE
TUNER
CD
AUX
FM
LW
AM
MW
PROGRAM
TUNED
STEREO
TOTAL
FP
1(C0)
2(C1)
3(C2)

SEGMENT


TAPE
TUNER
CD
AUX
FM
LW
AM
MW
PROGRAM
TUNED
STEREO
TOTAL
FP
4(S0)
5(S1)
6(S2)
7(S3)
8(S4)
9(S5)
10(S6)
11(S7)
12(S8)
13(S9)
14(S10)
15(S11)
16(S12)
17(S13)
18(S14)
19(S15)
20(S16)
21(S17)
22(S18)
23(S19)
24(S20)
25(S21)
26(S22)
27(S23)

■ MEASUREMENTS AND ADJUSTMENTS

<TUNER SECTION>

PREPARATION

1. Remove the front cabinet (See Ref. No. 1 of the disassembly instructions).
2. Remove the top cabinet (See Ref. No. 2 of the disassembly instructions).
3. Remove the LED P.C.B. (See Ref. No. 3 of the disassembly instructions).
4. Remove the 5 screws (❶~❺). (See Fig. 1)
5. Pull down the CD operation P.C.B. in the direction of arrow ❶ and then remove it in the direction of arrow ❷. (See Fig. 2)
6. Remove the 1 screw (❻). (See Fig. 3)
7. Remove the 2 flat cables (CS305, CS306). (See Fig. 3)
8. Remove the 2 screws (❼, ❽). (See Fig. 4)
9. Remove the 2 flat cable (CS1 CP1) and then remove the tuner P.C.B. (See Fig. 4)
10. Take out the tuner P.C.B. and insert the flat cable into the connector (CS1). (See Fig. 5)

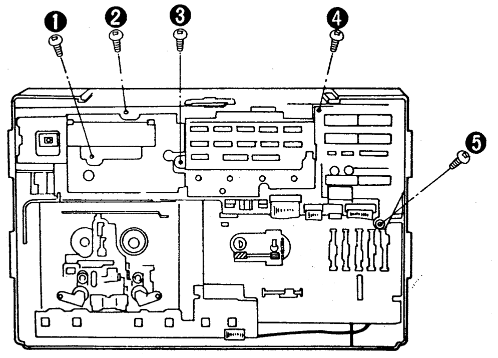


Fig. 1

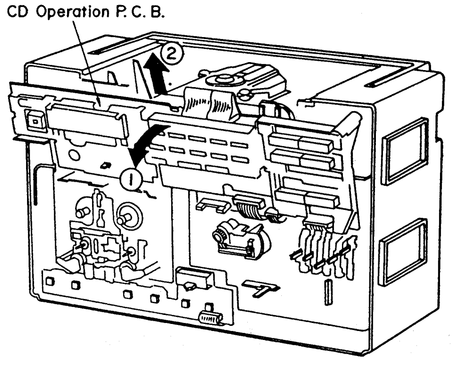
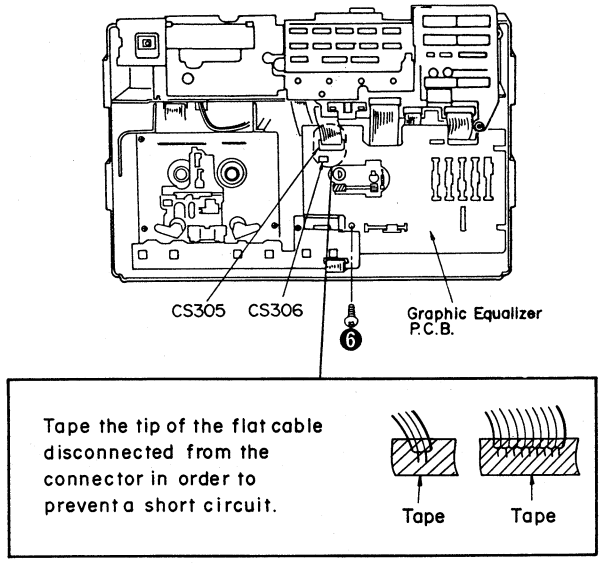


Fig. 2



Tape the tip of the flat cable disconnected from the connector in order to prevent a short circuit.

Fig. 3

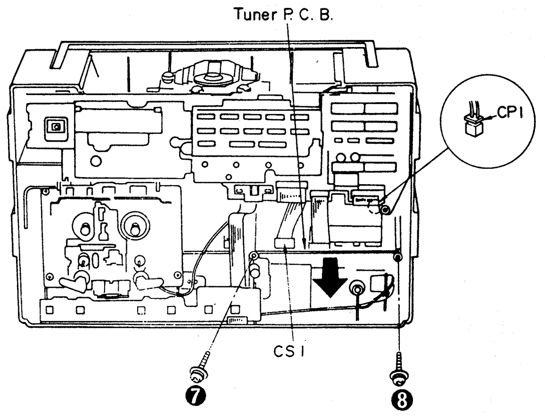


Fig. 4

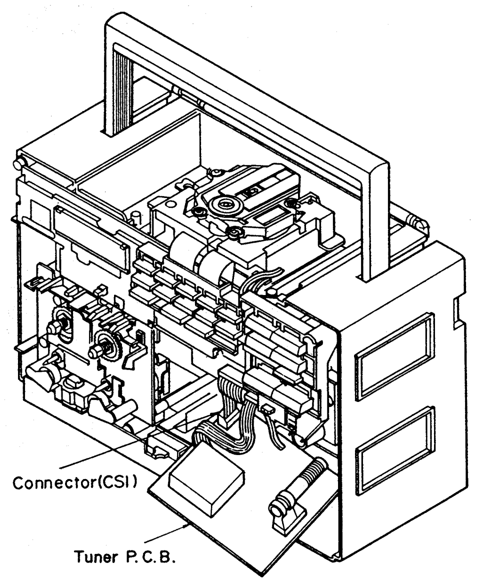


Fig. 5

■ ADJUSTMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ADJUSTMENT

1. Set volume control to maximum.
2. Set G. EQ control to center.
3. Set band switch to FM, MW or LW.
4. Set FM mode selector to STEREO.
5. Set function selector to TUNER or TAPE.
6. Set power source voltage to 15V DC.
7. Output of singal generator should be no higher than necessary to obain an output reading.

<TUNER SECTION>

■ LW and MW ADJUSTMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO SIGNAL FREQUENCY SETTING	ELECTRONIC AC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT (Refer to Fig. 6)	REMARKS
		CONNECTIONS	FREQUENCY				
	AM-IF ADJUSTMENT						
(1)	MW	Fashion a loop of several turns of wire and radiate the signal into loop ANT of the reciver.	459kHz 30% Mod. at 400Hz	Point of non-interference. (on/about 600kHz)	Headphones Jack (Refer to Fig. 1)	T2 (AM IFT)	Adjust for maximum output.
	LW-RF ADJUSTMENT						
(2)	LW	〃	146kHz (f min)	146kHz	TP11 (+) TP10 (−)	L6 (LW OSC Coil)	1.30V±0.05V reading on DC voltmeter.
(3)	LW	〃	288kHz (f max)	288kHz	〃	——	6.9V±0.6V reading on DC voltmeter. (check only)
(4)	LW	〃	162kHz	162kHz	Headphones Jack (Refer to Fig. 1)	(*) L4-2 (LW ANT Coil)	Adjust for maximum output. Adjust L4-2 moving coil along ferrite core.
(5)	LW	〃	270kHz	270kHz	〃	CT3 (LW ANT Trimmer)	Adjust for maximum output Repeat step (2)~(5)
	(*1) Fix antenna coil with wax after completing alignment.						
	MW-RF ADJUSTMENT						
(6)	MW	〃	522kHz (f min)	522kHz	TP9 (+) TP10 (−)	——	1.35V±0.3V reading on DC voltmeter. (Check only)
(7)	MW	〃	1611kHz (f max)	1611kHz	〃	——	7.50V±0.8V reading on DC voltmeter. (Check only)
(8)	MW	〃	594kHz	594kHz	Headphones Jack (Refer to Fig. 1)	(*) L4-1 (MW ANT Coil)	Adjust for maximum output. Adjust L4-1 by moving coil bobbim along ferrite core.
(9)	MW	〃	1404kHz	1404kHz	〃	CT2 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (6)~(9).
	(*1) Fix antenna coil with wax after completing alignment.						

■ FM ADJUSTMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO SIGNAL FREQUENCY SETTING	ELECTRONIC AC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
	FM-IF ADJUSTMENT						
(1)	FM	High side thru. 0.001µF to test point TP1. Negative side to test point TP2.	10.7MHz	Point of nonint-erference. (on/about 90MHz)	Connect vert. amp. of scope to test point TP4. Negative side to test point TP5.	T1 (FM 1st IFT)	Wave form is shown in Fig. 2.
(2)	FM	〃	〃	〃	〃	T3 (FM 2nd IFT)	Wave form is shown in Fig. 3.
	FM-RF ADJUSTMENT						
(3)	FM	Connect to test point TP1 throught FM dummy antenna. Negative side to test point TP2.	87.5kHz (f min)	87.5kHz	TP9 (+) TP10 (−)	——	2.7V±1.0V reading on DC voltmeter. (Check only)
	FM		108MHz (f max)	108MHz	TP9 (+) TP10 (−)	——	7.2V±1.0V reading on DC voltmeter. (Check only)
(4)	FM		90MHz	90MHz	——	No adjustment and check.	
(5)	FM		106MHz	106MHz	Headphons Jack (Refer to Fig. 1)	CT1 (FM ANT Trimmer)	(*2) Adjust for maximum output. Repeat steps (3)~(5).
	(*2) Three output responses will be present; proper tuning is the center frequency.						

■ FM-MPX VCO ADJUS

FM SIGNAL GENERA SOURCE CONNECTI
98MHz, 60dB (CW) Connec point TP1 through FM dum antenna. Negative side to TP2.

<TAPE DECK SECTION

■ HEAD AZIMUTH ADJU

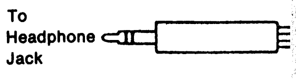
TEST TAPE	
QZZCFM (8kHz, −20dB)	He (R

■ REC BIAS VOLTAGE

TEST TAPE	
Use CrO₂ tape and Normal tape	TP TP (R

■ ADJUSTMENT POINT

- Please refer to Circuit Board



F

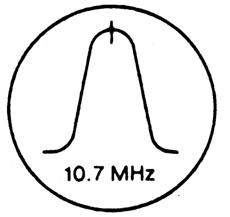
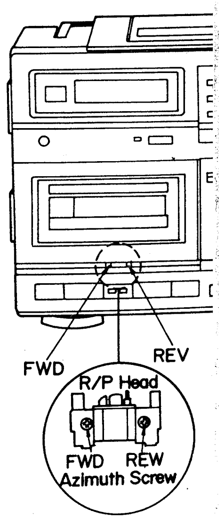


Fig. 2



■ FM-MPX VCO ADJUSTMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
98 MHz, 60 dB (CW) Connect to test point TP1 through FM dummy antenna. Negative side to TP2.	TP6 ...(+) TP7 ...(−)	VR1	19 kHz	Adjust VR1, for 19 kHz±50 Hz reading on frequency counter.

<TAPE DECK SECTION>

■ HEAD AZIMUTH ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCFM (8 kHz, −20 dB)	Headphones Jack (32Ω) (Refer to Fig. 1)	Azimuth screw (Refer to Fig. 4)	Maximum output	• Playback mode.

■ REC BIAS VOLTAGE MEASUREMENTS

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC VOLTMETER	ADJUSTMENT	SPECIFICATION	REMARKS
Use CrO_2 tape and Normal tape	TP11 ...(+) TP12 ...(−) (Refer to Fig. 5)	——	CrO_2 .... 12±1 mV Normal....... 8±1 mV	• Record mode

■ ADJUSTMENT POINT

- Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

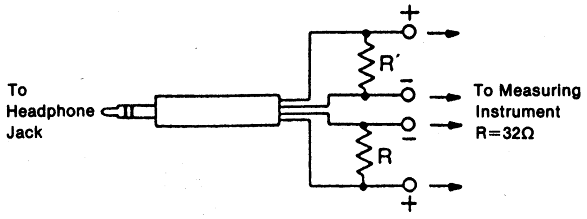

+
R'
−
R
+
To Headphone Jack
To Measuring Instrument
R=32Ω

Fig. 1

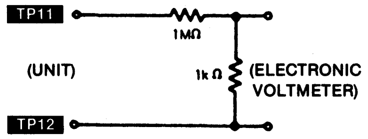

TP11
1MΩ
(UNIT)
1kΩ
(ELECTRONIC VOLTMETER)
TP12

Fig. 5

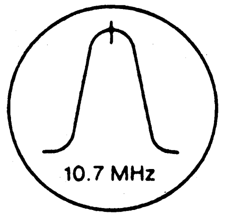


Fig. 2

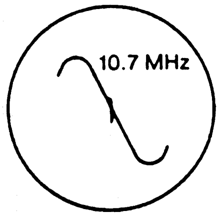


Fig. 3

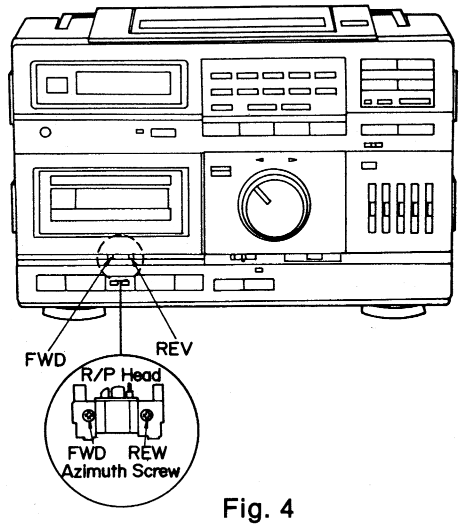

FWD
REV
R/P Head
FWD
REW
Azimuth Screw

Fig. 4

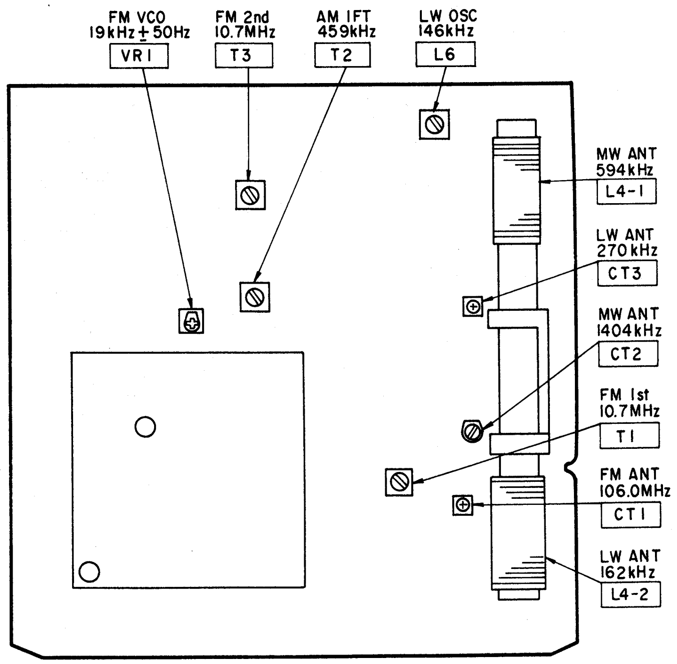

FM VCO 19kHz±50Hz
VR1
FM 2nd 10.7MHz
T3
AM IFT 459kHz
T2
LW OSC 146kHz
L6
MW ANT 594kHz
L4-1
LW ANT 270kHz
CT3
MW ANT 1404kHz
CT2
FM 1st 10.7MHz
T1
FM ANT 106.0MHz
CT1
LW ANT 162kHz
L4-2

Fig. 6

<CD PLAYER SECTION>

Caution:

- It is very dangerous to look at or touch the laser beam. (Laser radiation is invisible.)
  With the unit turned "on", laser radiation is emitted from the pickup lens.
  Avoid exposure to the laser beam, especially when performing adjustments.

PREPARATION

1. Remove the front cabinet (See Ref. No. 1 of the disassembly instructions).
2. Remove the top cabinet (See Ref. No. 2 of the disassembly instructions).
3. Remove the 4 screws (❶~❹), and then remove the CD player unit. (See Fig. 1)
4. Install the removed CD player perpendicular to the ribs on the rear cabinet. (See Fig. 2)
5. Remove the disc holder and magnet (See Ref. No. 17 of the disassembly instructions). (See Fig. 3)
6. Place the test disc and magnet on the turntable. (See Fig. 4)

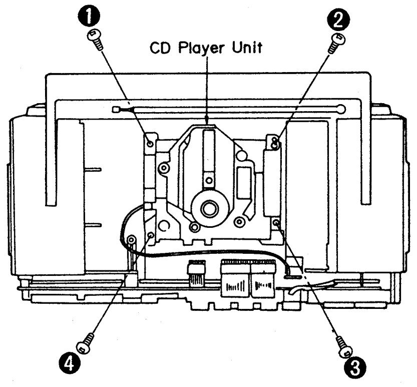

❶
❷
CD Player Unit
❹
❸

Fig. 1

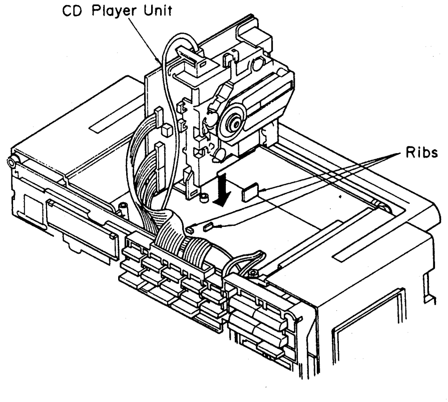

CD Player Unit
Ribs

Fig. 2

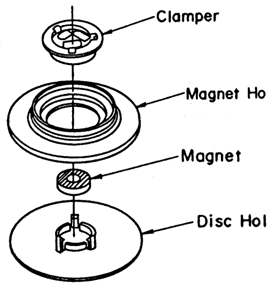

Clamper
Magnet Holder
Magnet
Disc Holder

Fig. 3

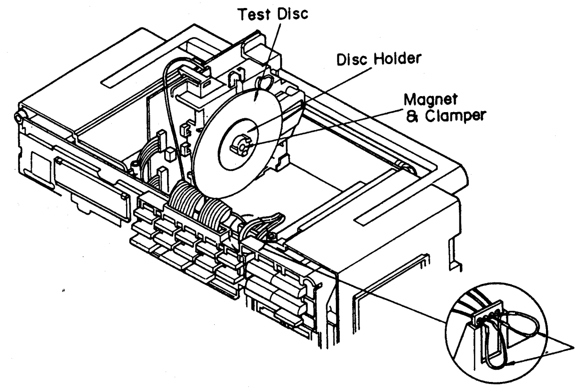
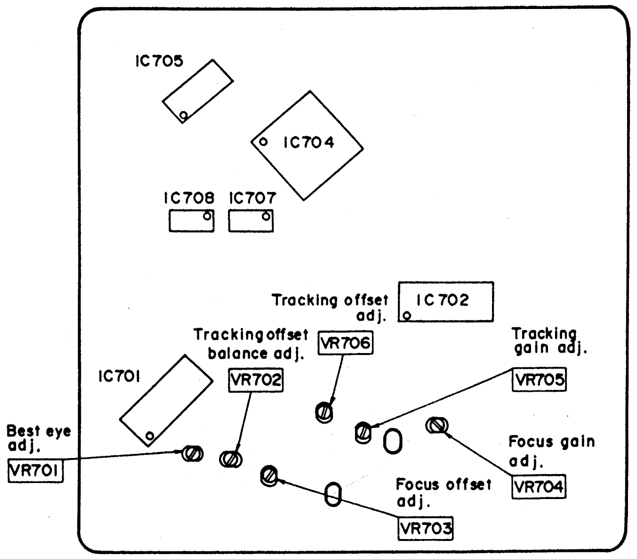
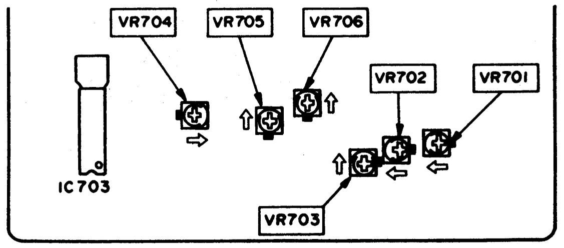

Test Disc
Disc Holder
Magnet & Clamper

Fig. 4

ADJUSTMENT POINTS

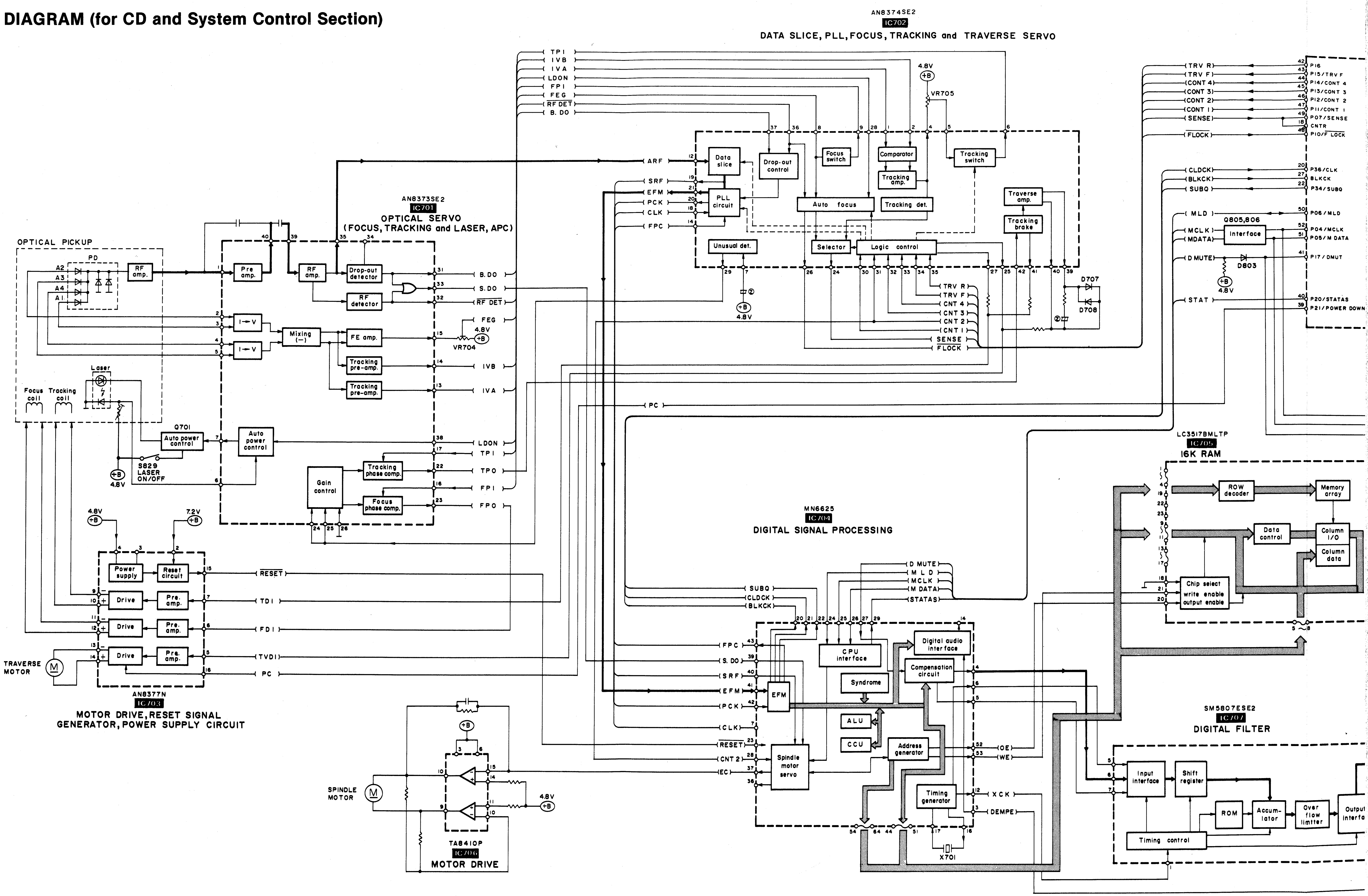
- Please refer to Circuit Board and Wiring Connection Diagram for test point locations.


IC705
IC704
IC708
IC707
Tracking offset adj.
IC702
Tracking offset balance adj.
VR706
Tracking gain adj.
IC701
VR702
VR705
Best eye adj.
VR701
Focus gain adj.
Focus offset adj.
VR704
VR703

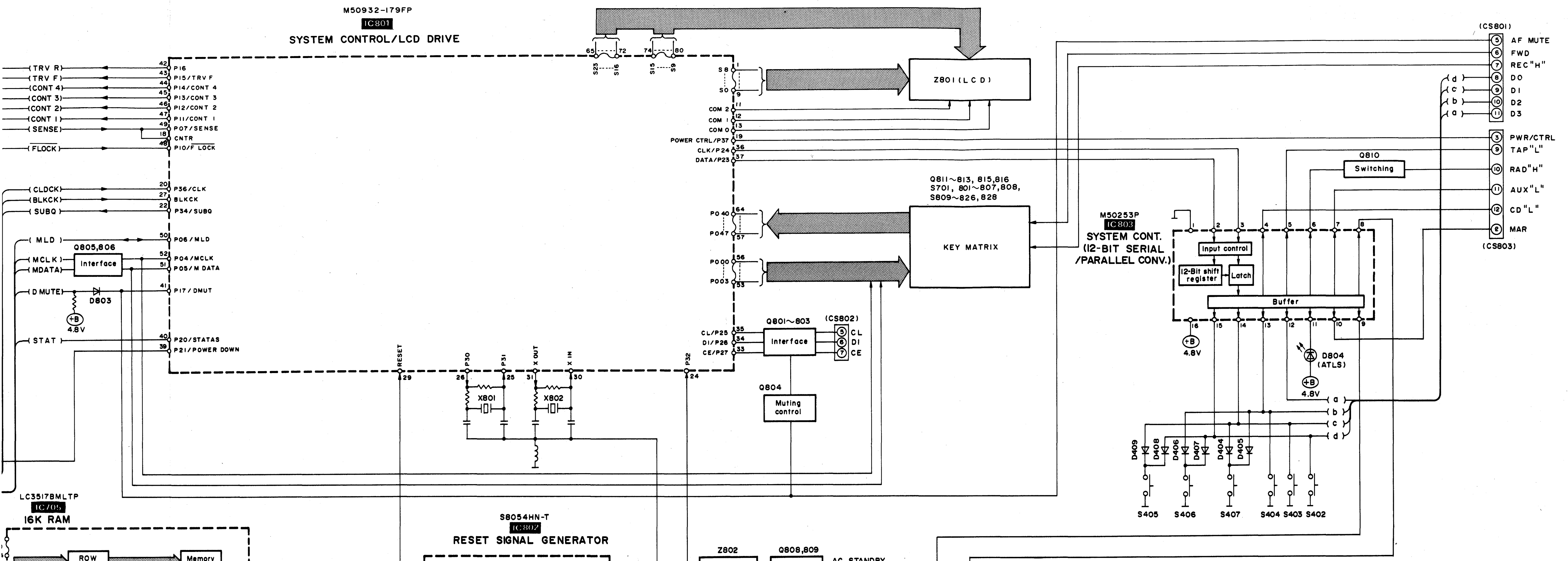

VR704
VR705
VR706
VR702
VR701
IC703
VR703

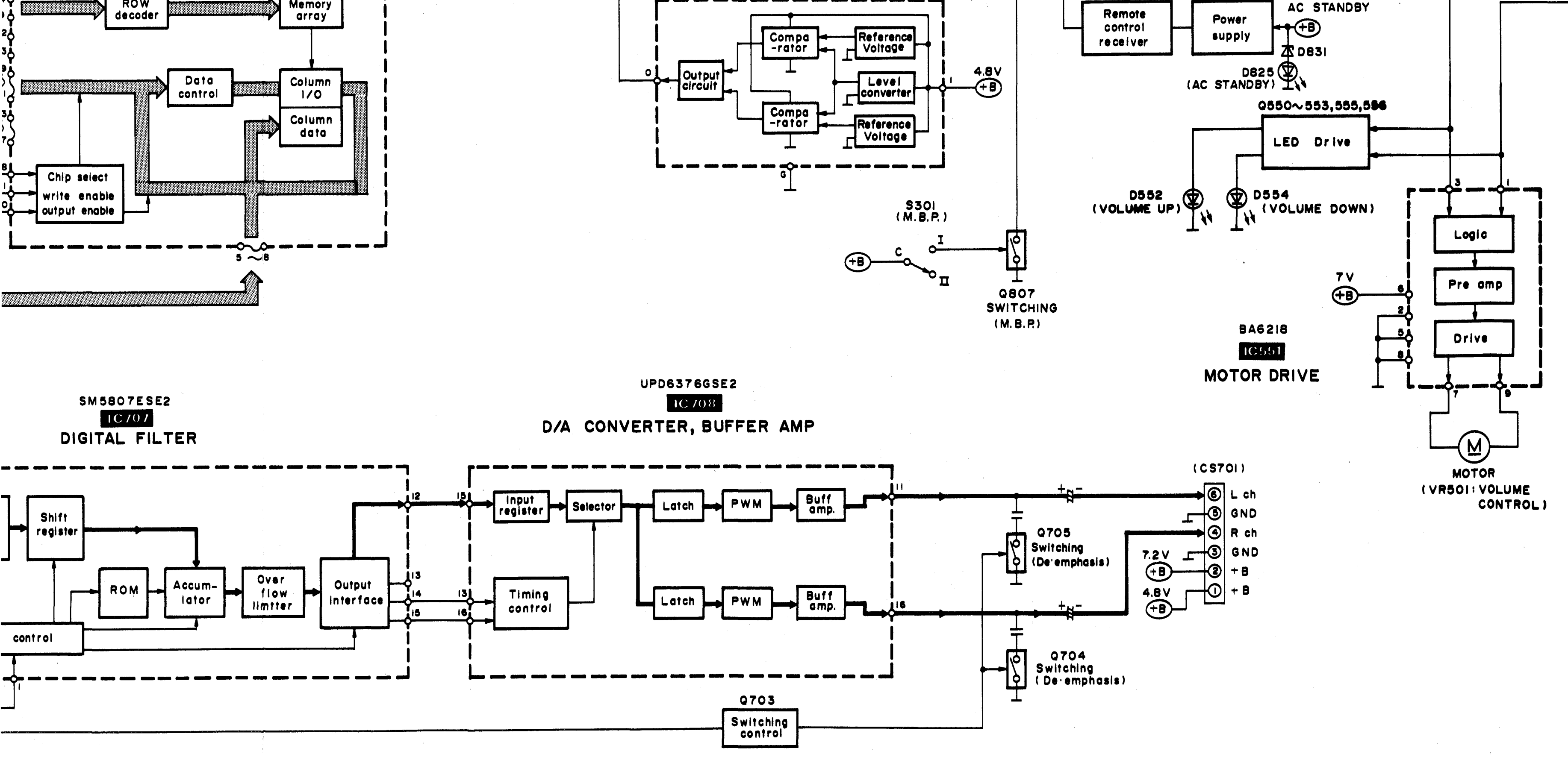
(Temporary VR setting if any of the trimmer VRs are replaced or require readjustment, temporarily set them to the following positions.)

■ BLOCK DIAGRAM (for CD and System Control Section)



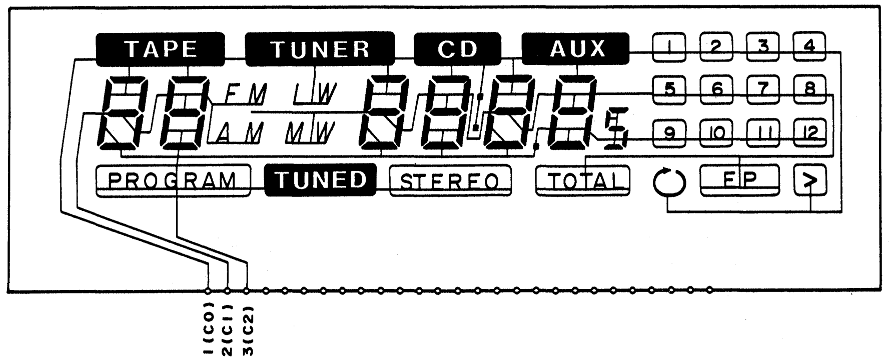
AN8374SE2
IC702
DATA SLICE, PLL, FOCUS, TRACKING and TRAVERSE SERVO
TPI
IVB
IVA
LDON
FPI
FEG
RF DET
B. DO
4.8V
+B
VR705
Data slice
Drop-out control
Focus switch
Comparator
Tracking amp.
Tracking switch
ARF
SRF
EFM
PCK
CLK
FPC
PLL circuit
Auto focus
Tracking det.
Traverse amp.
Tracking brake
Unusual det.
Selector
Logic control
TRV R
TRV F
CNT 4
CNT 3
CNT 2
CNT 1
SENSE
FLOCK
D707
D708
4.8V
TRV R
TRV F
CONT 4
CONT 3
CONT 2
CONT 1
SENSE
FLOCK
P16
P15/TRV F
P14/CONT 4
P13/CONT 3
P12/CONT 2
P11/CONT 1
P07/SENSE
CNTR
P10/F LOCK
CLDCK
BLKCK
SUBQ
P36/CLK
BLKCK
P34/SUBQ
MLD
MCLK
MDATA
Q805,806
Interface
P06/MLD
P04/MCLK
P05/M DATA
D MUTE
D803
4.8V
P17/DMUT
STAT
P20/STATAS
P21/POWER DOWN
AN8373SE2
IC701
OPTICAL SERVO
(FOCUS, TRACKING and LASER, APC)
OPTICAL PICKUP
PD
A2
A3
A4
A1
RF amp.
Pre amp.
RF amp.
Drop-out detector
RF detector
B. DO
S. DO
RF DET
I→V
I→V
Mixing (−)
FE amp.
FEG
4.8V
VR704
Tracking pre-amp.
Tracking pre-amp.
IVB
IVA
Laser
Focus coil
Tracking coil
Q701
Auto power control
Auto power control
LDON
TPI
Gain control
Tracking phase comp.
Focus phase comp.
TPO
FPI
FPO
S829 LASER ON/OFF
4.8V
PC
4.8V
7.2V
Power supply
Reset circuit
Drive
Pre. amp.
Drive
Pre. amp.
Drive
Pre. amp.
RESET
TDI
FDI
TVDI
PC
TRAVERSE MOTOR
AN8377N
IC703
MOTOR DRIVE, RESET SIGNAL GENERATOR, POWER SUPPLY CIRCUIT
SPINDLE MOTOR
4.8V
TA8410P
IC706
MOTOR DRIVE
MN6625
IC704
DIGITAL SIGNAL PROCESSING
D MUTE
MLD
MCLK
M DATA
STATAS
SUBQ
CLDCK
BLKCK
FPC
S. DO
SRF
EFM
PCK
CLK
RESET
CNT 2
EC
CPU interface
Digital audio interface
Compensation circuit
Syndrome
EFM
ALU
CCU
Spindle motor servo
Address generator
Timing generator
OE
WE
XCK
DEMPE
X701
LC3517BMLTP
IC705
16K RAM
ROW decoder
Memory array
Data control
Column I/O
Column data
Chip select
write enable
output enable
SM5807ESE2
IC707
DIGITAL FILTER
Input interface
Shift register
ROM
Accum-lator
Over flow limiter
Output interfa
Timing control


M50932-179FP
IC801
SYSTEM CONTROL/LCD DRIVE
(TRV R)
(TRV F)
(CONT 4)
(CONT 3)
(CONT 2)
(CONT 1)
(SENSE)
(FLOCK)
P16
P15/TRV F
P14/CONT 4
P13/CONT 3
P12/CONT 2
P11/CONT 1
P07/SENSE
CNTR
P10/F LOCK
(CLDCK)
(BLKCK)
(SUBQ)
P36/CLK
BLKCK
P34/SUBQ
(MLD)
(MCLK)
(MDATA)
Q805,806
Interface
P06/MLD
P04/MCLK
P05/M DATA
(D MUTE)
D803
P17/DMUT
4.8V
(STAT)
P20/STATAS
P21/POWER DOWN
RESET
P30
P31
X OUT
X IN
P32
X801
X802
S23
S16
S15
S9
S8
S0
COM 2
COM 1
COM 0
POWER CTRL/P37
CLK/P24
DATA/P23
Z801 (LCD)
Q811~813, 815,816
S701, 801~807,808,
S809~826, 828
KEY MATRIX
PO40
PO47
PO00
PO03
Q801~803
Interface
(CS802)
CL
DI
CE
CL/P25
DI/P26
CE/P27
Q804
Muting control
M50253P
IC803
SYSTEM CONT.
(12-BIT SERIAL /PARALLEL CONV.)
Input control
12-Bit shift register
Latch
Buffer
4.8V
D804 (ATLS)
4.8V
Q810
Switching
(CS801)
AF MUTE
FWD
REC"H"
DO
DI
D2
D3
PWR/CTRL
TAP"L"
RAD"H"
AUX"L"
CD"L"
MAR
(CS803)
D409
D408
D406
D407
D404
D405
S405
S406
S407
S404
S403
S402
LC3517BMLTP
IC705
16K RAM
ROW decoder
Memory array
Data control
Column I/O
Column data
Chip select
write enable
output enable

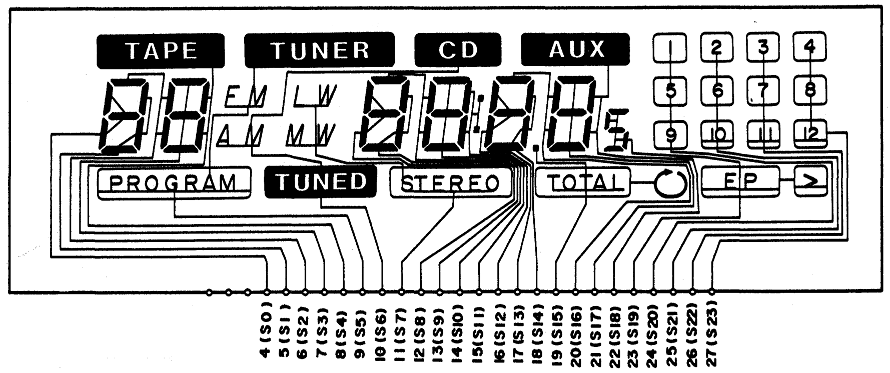

S8054HN-T
IC802
RESET SIGNAL GENERATOR
Output circuit
Compa-rator
Reference Voltage
Level converter
Compa-rator
Reference Voltage
4.8V
S301 (M.B.P.)
Q807
SWITCHING (M.B.P.)
Z802
Remote control receiver
Q808,809
Power supply
AC STANDBY
D831
D825 (AC STANDBY)
Q550~553,555,556
LED Drive
D552 (VOLUME UP)
D554 (VOLUME DOWN)
7V
BA6218
IC551
MOTOR DRIVE
Logic
Pre amp
Drive
MOTOR (VR501: VOLUME CONTROL)
SM5807ESE2
IC707
DIGITAL FILTER
Shift register
ROM
Accum-lator
Over flow limitter
Output interface
control
UPD6376GSE2
IC708
D/A CONVERTER, BUFFER AMP
Input register
Selector
Latch
PWM
Buff amp.
Timing control
Latch
PWM
Buff amp.
Q705
Switching (De-emphasis)
Q704
Switching (De-emphasis)
Q703
Switching control
(CS701)
L ch
GND
R ch
GND
+B
+B
7.2V
4.8V

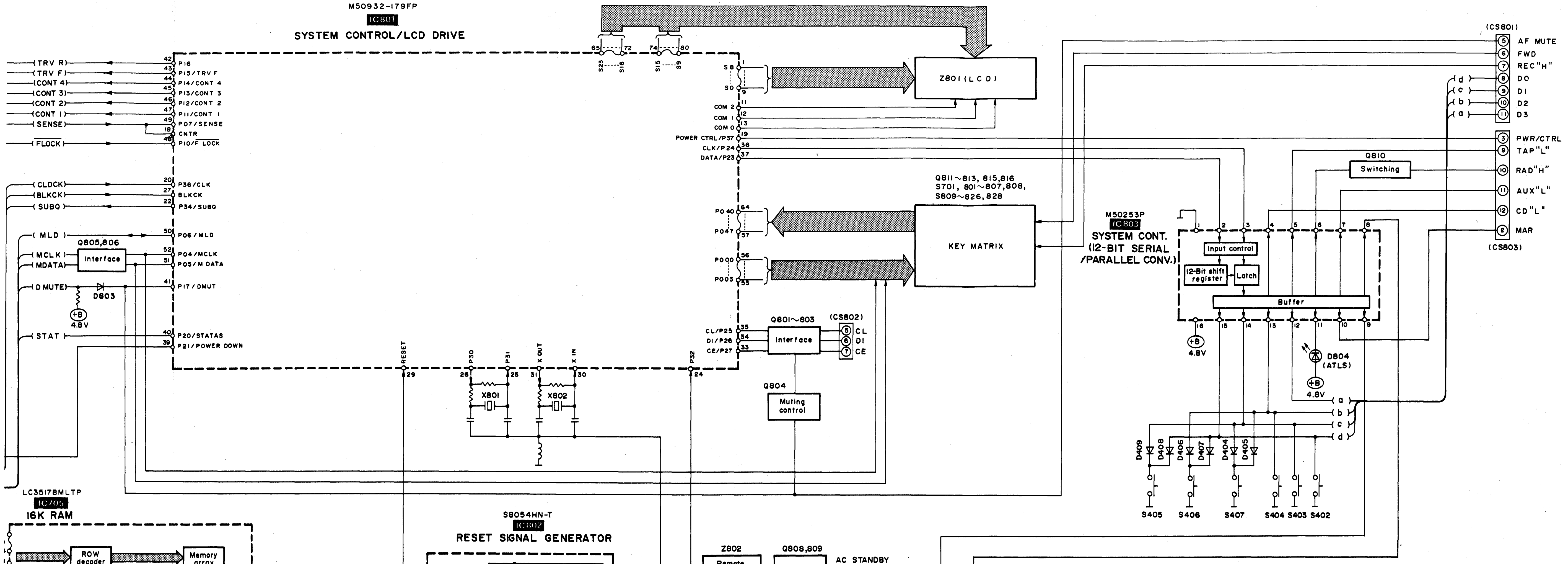
■ INTERNAL CONNECTIONS OF LCD (Liquid Crystal Display)

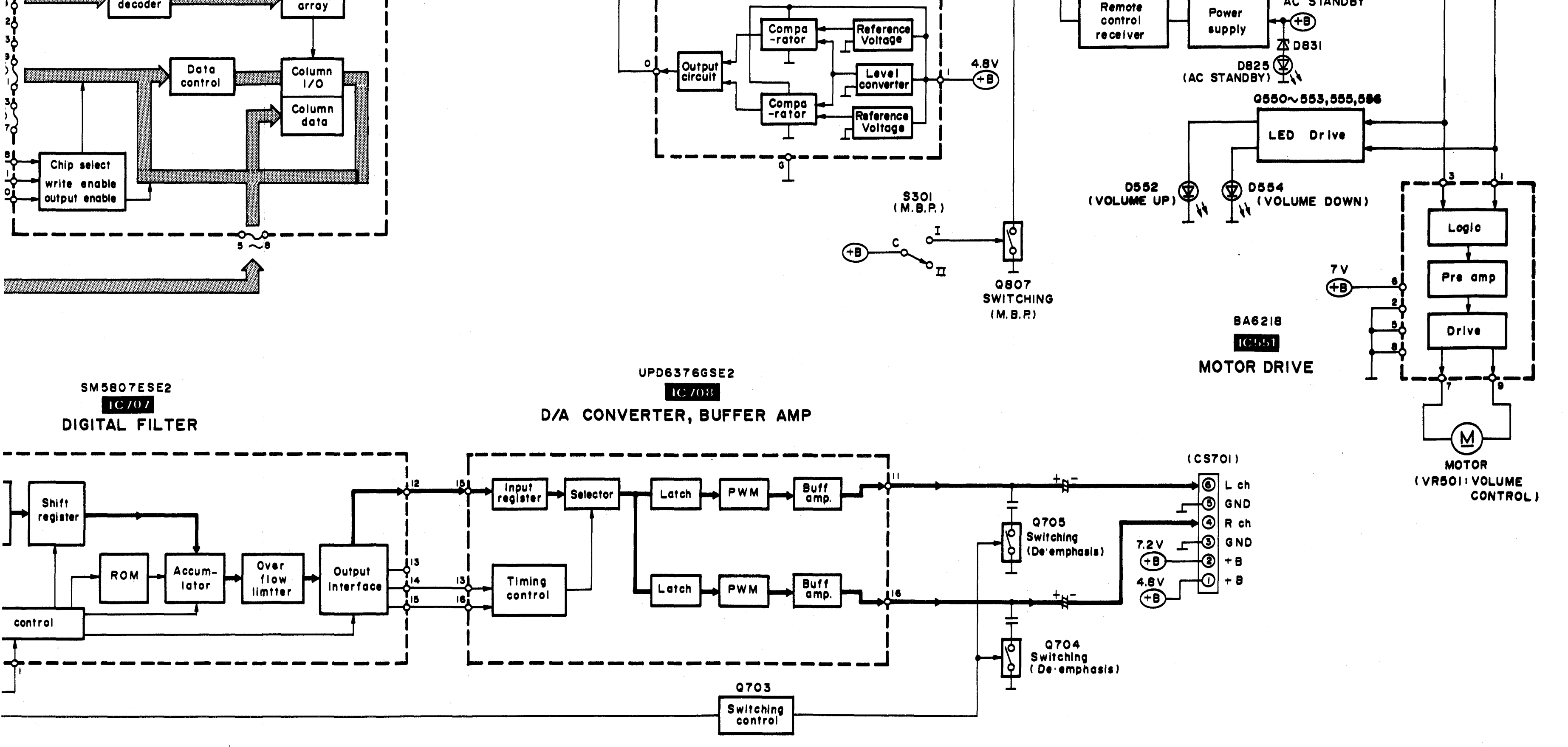
COMMON


TAPE
TUNER
CD
AUX
FM
LW
AM
MW
PROGRAM
TUNED
STEREO
TOTAL
EP
1(C0)
2(C1)
3(C2)

SEGMENT

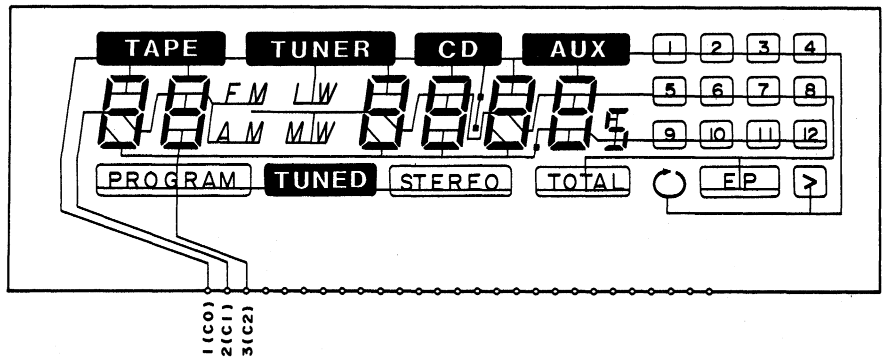

TAPE
TUNER
CD
AUX
FM
LW
AM
MW
PROGRAM
TUNED
STEREO
TOTAL
EP
4(S0)
5(S1)
6(S2)
7(S3)
8(S4)
9(S5)
10(S6)
11(S7)
12(S8)
13(S9)
14(S10)
15(S11)
16(S12)
17(S13)
18(S14)
19(S15)
20(S16)
21(S17)
22(S18)
23(S19)
24(S20)
25(S21)
26(S22)
27(S23)


M50932-179FP
IC801
SYSTEM CONTROL/LCD DRIVE
(TRV R)
(TRV F)
(CONT 4)
(CONT 3)
(CONT 2)
(CONT 1)
(SENSE)
(FLOCK)
(CLDCK)
(BLKCK)
(SUBQ)
(MLD)
(MCLK)
(MDATA)
Q805,806
Interface
(D MUTE)
D803
+B
4.8V
(STAT)
42 P16
43 P15/TRV F
44 P14/CONT 4
45 P13/CONT 3
46 P12/CONT 2
47 P11/CONT 1
49 P07/SENSE
18 CNTR
48 P10/F LOCK
20 P36/CLK
27 BLKCK
22 P34/SUBQ
50 P06/MLD
52 P04/MCLK
51 P05/M DATA
41 P17/DMUT
40 P20/STATAS
39 P21/POWER DOWN
65 72 74 80
S23 S16 S15 S9
S8 1
S0 9
COM 2 11
COM 1 12
COM 0 13
POWER CTRL/P37 19
CLK/P24 36
DATA/P23 37
P040 64
P047 57
P000 56
P003 53
CL/P25 35
DI/P26 34
CE/P27 33
RESET 29
P30 26
P31 25
X OUT 31
X IN 30
P32 24
X801
X802
Z801 (LCD)
Q811~813, 815,816
S701, 801~807,808,
S809~826,828
KEY MATRIX
Q801~803
Interface
(CS802)
5 CL
6 DI
7 CE
Q804
Muting control
M50253P
IC803
SYSTEM CONT.
(12-BIT SERIAL
/PARALLEL CONV.)
Input control
12-Bit shift register
Latch
Buffer
1 2 3 4 5 6 7 8
16 15 14 13 12 11 10 9
+B
4.8V
D804
(ATLS)
+B
4.8V
Q810
Switching
(CS801)
5 AF MUTE
6 FWD
7 REC"H"
d 8 D0
c 9 D1
b 10 D2
a 11 D3
3 PWR/CTRL
9 TAP"L"
10 RAD"H"
11 AUX"L"
12 CD"L"
2 MAR
(CS803)
a
b
c
d
D409
D408
D406
D407
D404
D405
S405
S406
S407
S404 S403 S402

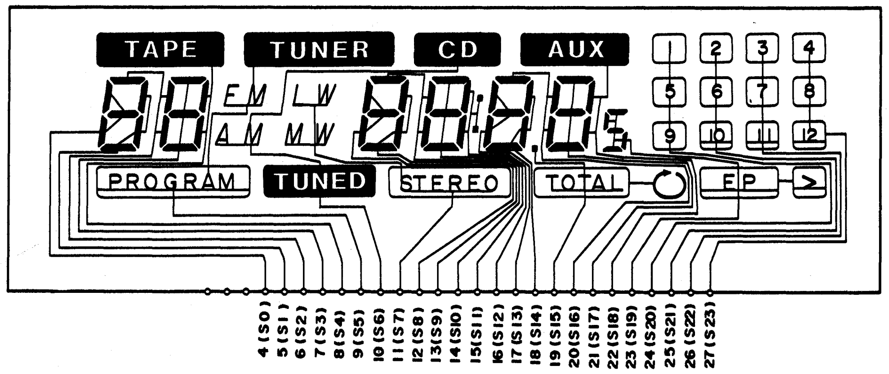

LC3517BMLTP
IC705
16K RAM
ROW decoder
Memory array
Data control
Column I/O
Column data
Chip select
write enable
output enable
5 ~ 8
S8054HN-T
IC802
RESET SIGNAL GENERATOR
Output circuit
Compa -rator
Reference Voltage
Level converter
Compa -rator
Reference Voltage
0
1
G
4.8V
+B
Z802
Remote control receiver
Q808,809
Power supply
AC STANDBY
+B
D831
D825
(AC STANDBY)
Q550~553,555,556
LED Drive
D552
(VOLUME UP)
D554
(VOLUME DOWN)
S301
(M.B.P.)
+B
C
I
II
Q807
SWITCHING
(M.B.P.)
7V
+B
Logic
Pre amp
Drive
3 1 6 2 5 8 7 9
BA6218
IC551
MOTOR DRIVE
M
MOTOR
(VR501: VOLUME CONTROL)
SM5807ESE2
IC707
DIGITAL FILTER
Shift register
ROM
Accum-lator
Over flow limtter
Output interface
control
12 13 14 15
UPD6376GSE2
IC708
D/A CONVERTER, BUFFER AMP
15 13 16
Input register
Selector
Timing control
Latch
PWM
Buff amp.
Latch
PWM
Buff amp.
11
16
Q705
Switching
(De-emphasis)
Q704
Switching
(De-emphasis)
Q703
Switching control
(CS701)
6 L ch
5 GND
4 R ch
3 GND
2 +B
1 +B
7.2V
+B
4.8V
+B

■ INTERNAL CONNECTIONS OF LCD (Liquid Crystal Display)

COMMON


TAPE
TUNER
CD
AUX
FM
LW
AM
MW
1 2 3 4
5 6 7 8
9 10 11 12
PROGRAM
TUNED
STEREO
TOTAL
FP
1(C0)
2(C1)
3(C2)

SEGMENT


TAPE
TUNER
CD
AUX
FM
LW
AM
MW
1 2 3 4
5 6 7 8
9 10 11 12
PROGRAM
TUNED
STEREO
TOTAL
FP
4(S0)
5(S1)
6(S2)
7(S3)
8(S4)
9(S5)
10(S6)
11(S7)
12(S8)
13(S9)
14(S10)
15(S11)
16(S12)
17(S13)
18(S14)
19(S15)
20(S16)
21(S17)
22(S18)
23(S19)
24(S20)
25(S21)
26(S22)
27(S23)

■ MEASUREMENTS AND ADJUSTMENTS

<TUNER SECTION>

PREPARATION

1. Remove the front cabinet (See Ref. No. 1 of the disassembly instructions).
2. Remove the top cabinet (See Ref. No. 2 of the disassembly instructions).
3. Remove the LED P.C.B. (See Ref. No. 3 of the disassembly instructions).
4. Remove the 5 screws (❶~❺). (See Fig. 1)
5. Pull down the CD operation P.C.B. in the direction of arrow ❶ and then remove it in the direction of arrow ❷. (See Fig. 2)
6. Remove the 1 screw (❻). (See Fig. 3)
7. Remove the 2 flat cables (CS305, CS306). (See Fig. 3)
8. Remove the 2 screws (❼, ❽). (See Fig. 4)
9. Remove the 2 flat cable (CS1 CP1) and then remove the tuner P.C.B. (See Fig. 4)
10. Take out the tuner P.C.B. and insert the flat cable into the connector (CS1). (See Fig. 5)

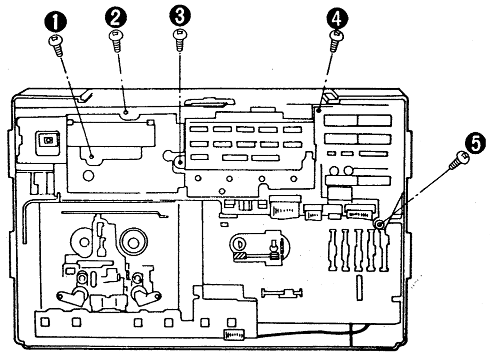


Fig. 1

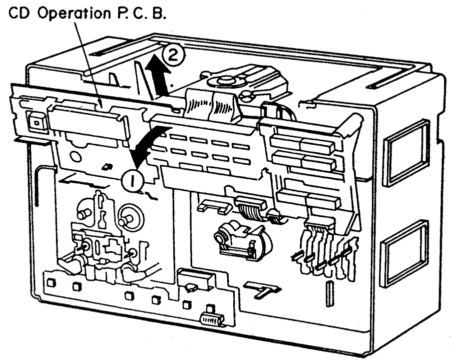
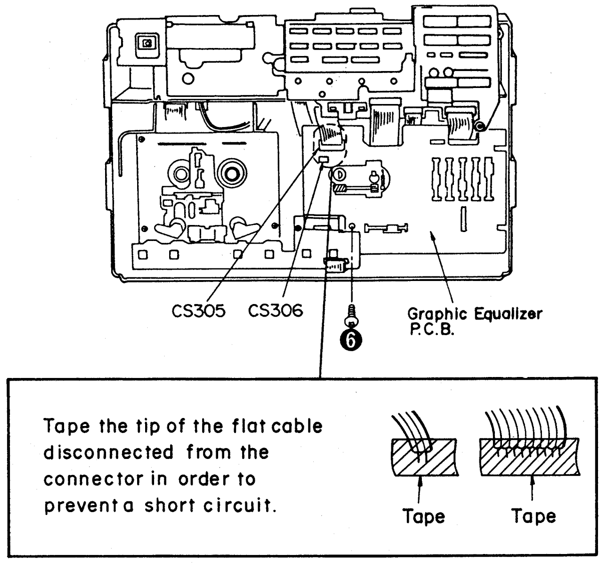


Fig. 2



Tape the tip of the flat cable disconnected from the connector in order to prevent a short circuit.

Fig. 3

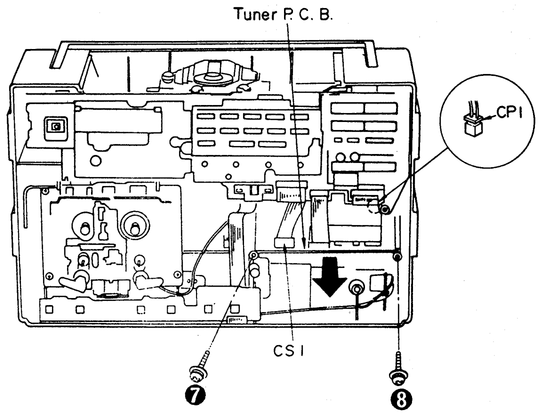


Fig. 4

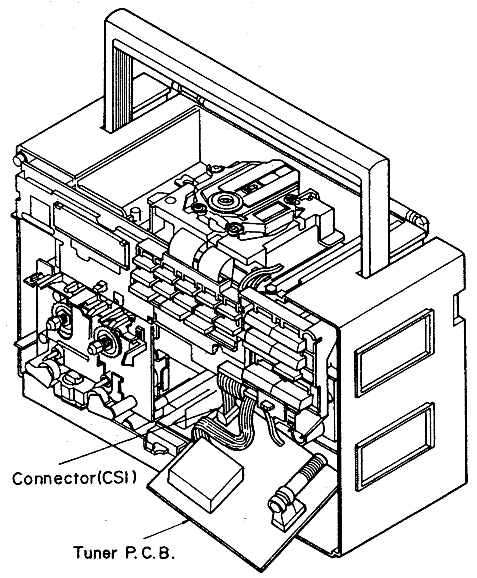


Fig. 5

■ ADJUSTMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ADJUSTMENT

1. Set volume control to maximum.
2. Set G. EQ control to center.
3. Set band switch to FM, MW or LW.
4. Set FM mode selector to STEREO.
5. Set function selector to TUNER or TAPE.
6. Set power source voltage to 15V DC.
7. Output of singal generator should be no higher than necessary to obain an output reading.

<TUNER SECTION>

■ LW and MW ADJUSTMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO SIGNAL FREQUENCY SETTING	ELECTRONIC AC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT (Refer to Fig. 6)	REMARKS
		CONNECTIONS	FREQUENCY				
	AM-IF ADJUSTMENT						
(1)	MW	Fashion a loop of several turns of wire and radiate the signal into loop ANT of the reciver.	459kHz 30% Mod. at 400Hz	Point of non-interference. (on/about 600kHz)	Headphones Jack (Refer to Fig. 1)	T2 (AM IFT)	Adjust for maximum output.
	LW-RF ADJUSTMENT						
(2)	LW	〃	146kHz (f min)	146kHz	TP11 (+) TP10 (−)	L6 (LW OSC Coil)	1.30V±0.05V reading on DC voltmeter.
(3)	LW	〃	288kHz (f max)	288kHz	〃	——	6.9V±0.6V reading on DC voltmeter. (check only)
(4)	LW	〃	162kHz	162kHz	Headphones Jack (Refer to Fig. 1)	(*) L4-2 (LW ANT Coil)	Adjust for maximum output. Adjust L4-2 moving coil along ferrite core.
(5)	LW	〃	270kHz	270kHz	〃	CT3 (LW ANT Trimmer)	Adjust for maximum output Repeat step (2)~(5)
	(*1) Fix antenna coil with wax after completing alignment.						
	MW-RF ADJUSTMENT						
(6)	MW	〃	522kHz (f min)	522kHz	TP9 (+) TP10 (−)	——	1.35V±0.3V reading on DC voltmeter. (Check only)
(7)	MW	〃	1611kHz (f max)	1611kHz	〃	——	7.50V±0.8V reading on DC voltmeter. (Check only)
(8)	MW	〃	594kHz	594kHz	Headphones Jack (Refer to Fig. 1)	(*) L4-1 (MW ANT Coil)	Adjust for maximum output. Adjust L4-1 by moving coil bobbim along ferrite core.
(9)	MW	〃	1404kHz	1404kHz	〃	CT2 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (6)~(9).
	(*1) Fix antenna coil with wax after completing alignment.						

■ FM ADJUSTMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO SIGNAL FREQUENCY SETTING	ELECTRONIC AC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
	FM-IF ADJUSTMENT						
(1)	FM	High side thru. 0.001μF to test point TP1. Negative side to test point TP2.	10.7MHz	Point of nonint-erference. (on/about 90MHz)	Connect vert. amp. of scope to test point TP4. Negative side to test point TP5.	T1 (FM 1st IFT)	Wave form is shown in Fig. 2.
(2)	FM	〃	〃	〃	〃	T3 (FM 2nd IFT)	Wave form is shown in Fig. 3.
	FM-RF ADJUSTMENT						
(3)	FM	Connect to test point TP1 throught FM dummy antenna. Negative side to test point TP2.	87.5kHz (f min)	87.5kHz	TP9 (+) TP10 (−)	——	2.7V±1.0V reading on DC voltmeter. (Check only)
	FM		108MHz (f max)	108MHz	TP9 (+) TP10 (−)	——	7.2V±1.0V reading on DC voltmeter. (Check only)
(4)	FM		90MHz	90MHz	——	No adjustment and check.	
(5)	FM		106MHz	106MHz	Headphons Jack (Refer to Fig. 1)	CT1 (FM ANT Trimmer)	(*2) Adjust for maximum output. Repeat steps (3)~(5).
	(*2) Three output responses will be present; proper tuning is the center frequency.						

■ FM-MPX VCO ADJ

FM SIGNAL GENE SOURCE CONNE
98MHz, 60dB (CW) Con point TP1 through FM d antenna. Negative side to TP2.

<TAPE DECK SECTI

■ HEAD AZIMUTH A

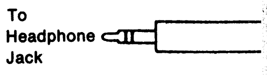
TEST TAPE
QZZCFM (8kHz, −20dB)

■ REC BIAS VOLTAG

TEST TAPE
Use CrO$_2$ tape and Normal tape

■ ADJUSTMENT POI

- Please refer to Circuit Bo



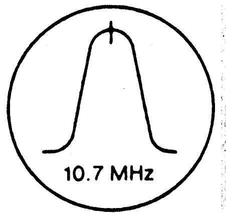
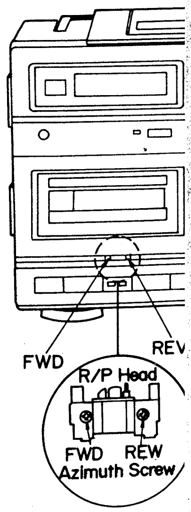


Fig. 2



■ FM-MPX VCO ADJUSTMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
98MHz, 60dB (CW) Connect to test point TP1 through FM dummy antenna. Negative side to TP2.	TP6 ...(+) TP7 ...(−)	VR1	19kHz	Adjust VR1, for 19kHz±50Hz reading on frequency counter.

<TAPE DECK SECTION>

■ HEAD AZIMUTH ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCFM (8kHz, −20dB)	Headphones Jack (32Ω) (Refer to Fig. 1)	Azimuth screw (Refer to Fig. 4)	Maximum output	• Playback mode.

■ REC BIAS VOLTAGE MEASUREMENTS

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC VOLTMETER	ADJUSTMENT	SPECIFICATION	REMARKS
Use CrO_2 tape and Normal tape	TP11 ...(+) TP12 ...(−) (Refer to Fig. 5)	——	CrO_2 .... 12±1mV Normal....... 8±1mV	• Record mode

■ ADJUSTMENT POINT

- Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

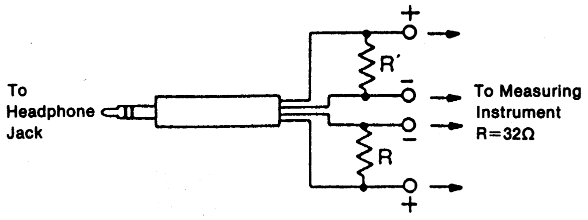

To Headphone Jack
+
R'
−
R
−
+
To Measuring Instrument R=32Ω

Fig. 1

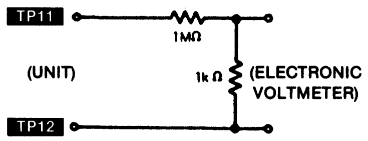

TP11
1MΩ
(UNIT)
1kΩ
(ELECTRONIC VOLTMETER)
TP12

Fig. 5

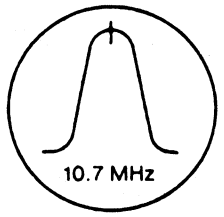


Fig. 2

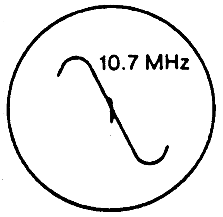


Fig. 3

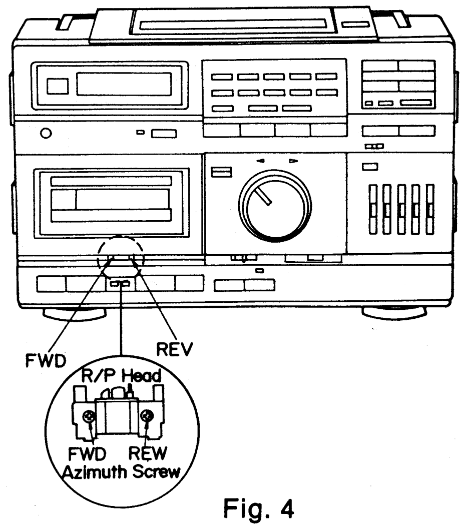

FWD
REV
R/P Head
FWD
REW
Azimuth Screw

Fig. 4

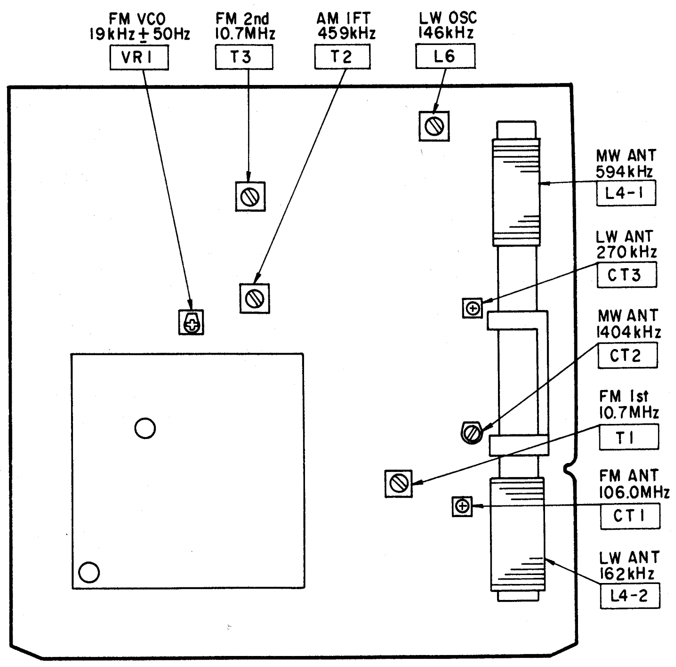

FM VCO 19kHz±50Hz
VR1
FM 2nd 10.7MHz
T3
AM IFT 459kHz
T2
LW OSC 146kHz
L6
MW ANT 594kHz
L4-1
LW ANT 270kHz
CT3
MW ANT 1404kHz
CT2
FM 1st 10.7MHz
T1
FM ANT 106.0MHz
CT1
LW ANT 162kHz
L4-2

Fig. 6

<CD PLAYER SECTION>

Caution:

- It is very dangerous to look at or touch the laser beam. (Laser radiation is invisible.) With the unit turned "on", laser radiation is emitted from the pickup lens. Avoid exposure to the laser beam, especially when performing adjustments.

PREPARATION

1. Remove the front cabinet (See Ref. No. 1 of the disassembly instructions).
2. Remove the top cabinet (See Ref. No. 2 of the disassembly instructions).
3. Remove the 4 screws (❶~❹), and then remove the CD player unit. (See Fig. 1)
4. Install the removed CD player perpendicular to the ribs on the rear cabinet. (See Fig. 2)
5. Remove the disc holder and magnet (See Ref. No. 17 of the disassembly instructions). (See Fig. 3)
6. Place the test disc and magnet on the turntable. (See Fig. 4)

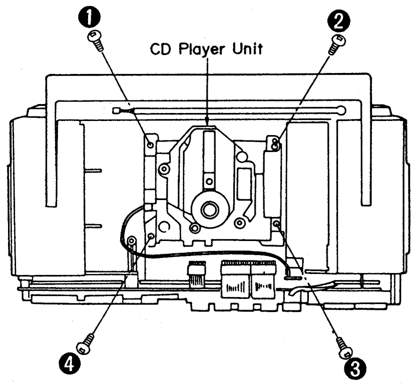

❶
❷
CD Player Unit
❹
❸

Fig. 1

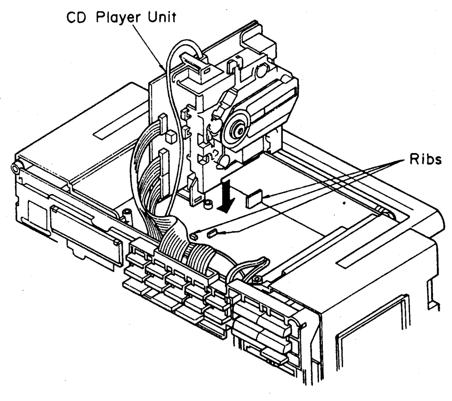

CD Player Unit
Ribs

Fig. 2

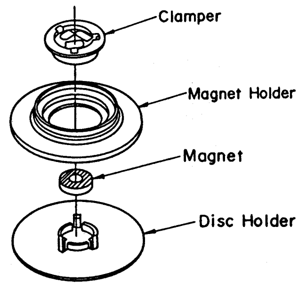

Clamper
Magnet Holder
Magnet
Disc Holder

Fig. 3

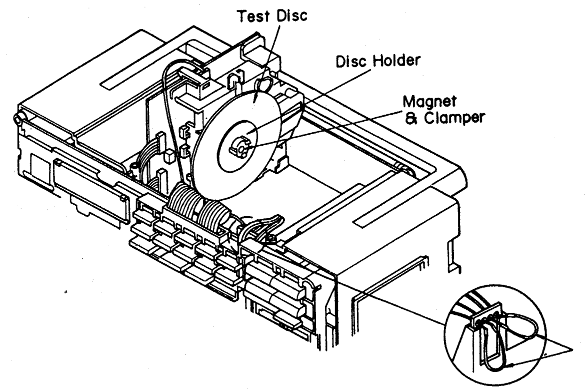
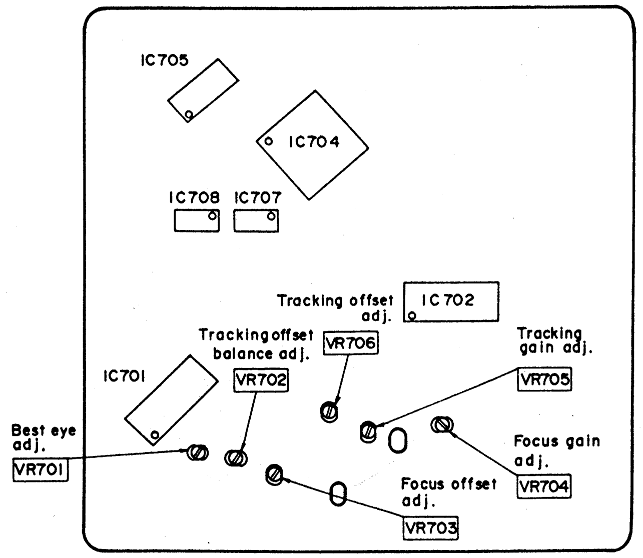
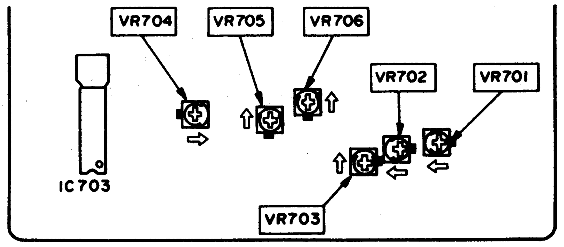

Test Disc
Disc Holder
Magnet & Clamper

Fig. 4

ADJUSTMENT POINTS

- Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

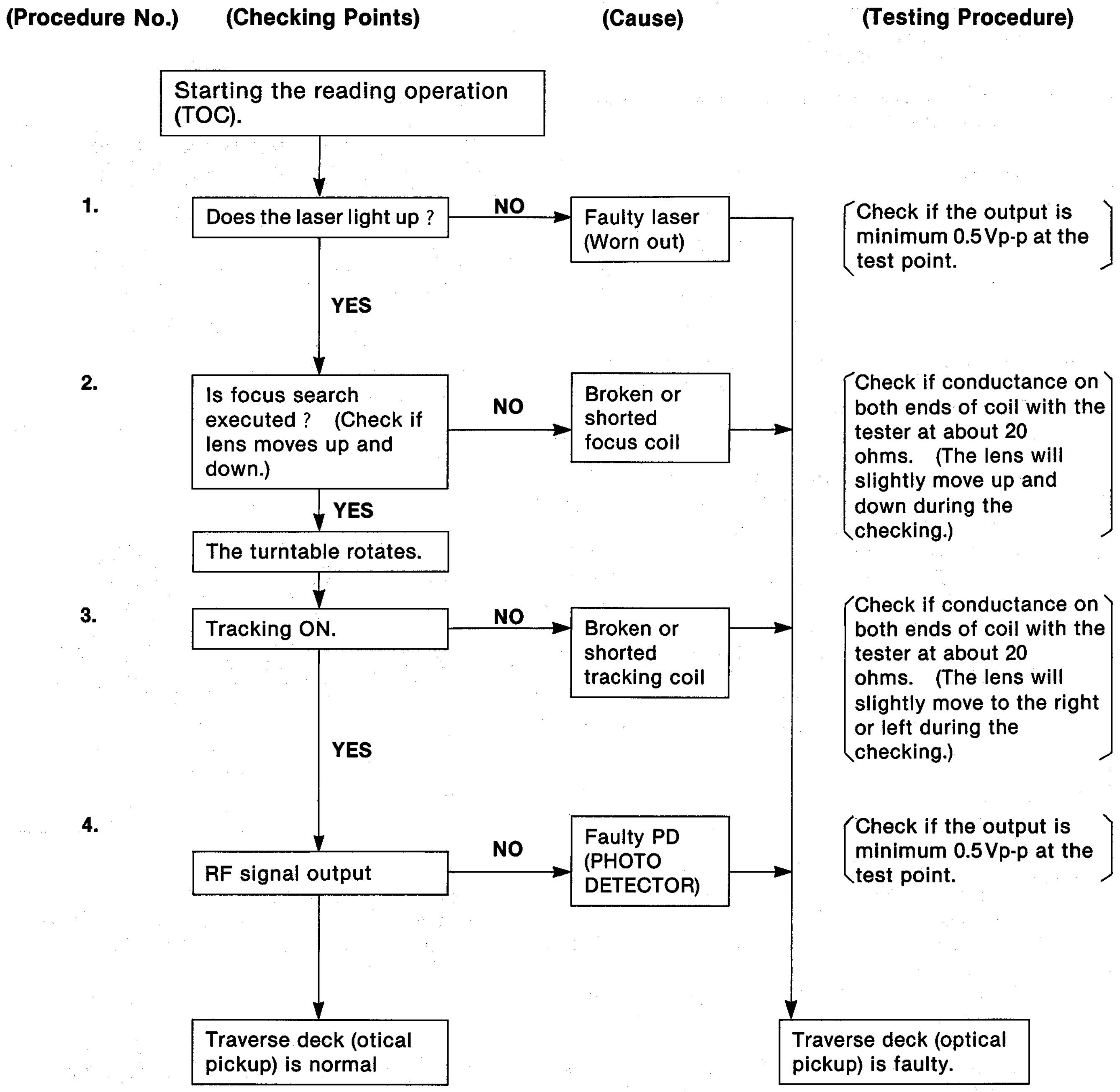

IC705
IC704
IC708
IC707
Tracking offset adj.
IC702
Trackingoffset balance adj.
VR706
VR702
Tracking gain adj.
VR705
IC701
Best eye adj.
VR701
Focus gain adj.
VR704
Focus offset adj.
VR703


VR704
VR705
VR706
VR702
VR701
IC703
VR703

(Temporary VR setting if any of the trimmer VRs are replaced or require readjustment, temporarily set them to the following positions.)

■ CHECKING THE OPERATION PROBLEMS ON THE TRAVERSE DECK (OPTICAL PICKUP)

Make sure to follow the procedures below to check the operation problems of the traverse deck (optical pickup) before replacing it. Replace the traverse deck only after the problem is identified.


(Procedure No.)
(Checking Points)
(Cause)
(Testing Procedure)
Starting the reading operation (TOC).
1.
Does the laser light up ?
NO
Faulty laser (Worn out)
YES
2.
Is focus search executed ? (Check if lens moves up and down.)
NO
Broken or shorted focus coil
YES
The turntable rotates.
3.
Tracking ON.
NO
Broken or shorted tracking coil
YES
4.
RF signal output
NO
Faulty PD (PHOTO DETECTOR)
Traverse deck (otical pickup) is normal
Traverse deck (optical pickup) is faulty.

1. (Check if the output is minimum 0.5 Vp-p at the test point.)
2. (Check if conductance on both ends of coil with the tester at about 20 ohms. (The lens will slightly move up and down during the checking.))
3. (Check if conductance on both ends of coil with the tester at about 20 ohms. (The lens will slightly move to the right or left during the checking.))
4. (Check if the output is minimum 0.5 Vp-p at the test point.)

- Check electrical cirucit.
- CD is not adjusted properly. Adjust CD again.
  - (1) Mechanical adjustment.
  - (2) Focus balance adjustment (PD balance)
  - (3) Focus gain adjustment.
  - (4) Tracking gain adjustment.
  - (5) Focus offset adjustment.
  - (6) Tracking offset adjustment.
  - (7) Tracking balance adjustment.

  } Refer to pp.46~48
- Check for flaws on disc or if it is warped or not centered.

※ Replace traverse deck.

※ Checking Operations of Replaced Traverse Deck (New Traverse Deck)

a) Check the operations described below on the traverse deck after replacing it.

∗ Checking Skip Search
1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

∗ Checking Manual Search
1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

∗ Checking Using Defect Disc
1. Play the 0.7 mm black dot and the 0.7 mm wedge on the defect test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

b) If the operations are normal, CD adjustments are not required when the traverse deck is replaced.

Note: CD adjustments are required in the cases below. (Mechanical adjustments are not necessary.)
(See item 2-7 on pp. 46~48.)
- If audio is not played back continuously or noises occur after step (a) is executed.
- If the ajdustment VRs (VR701~VR706) were rotated before the traverse deck was replaced.
- If the ICs in the servo circuit or adjustment VRs were replaced.

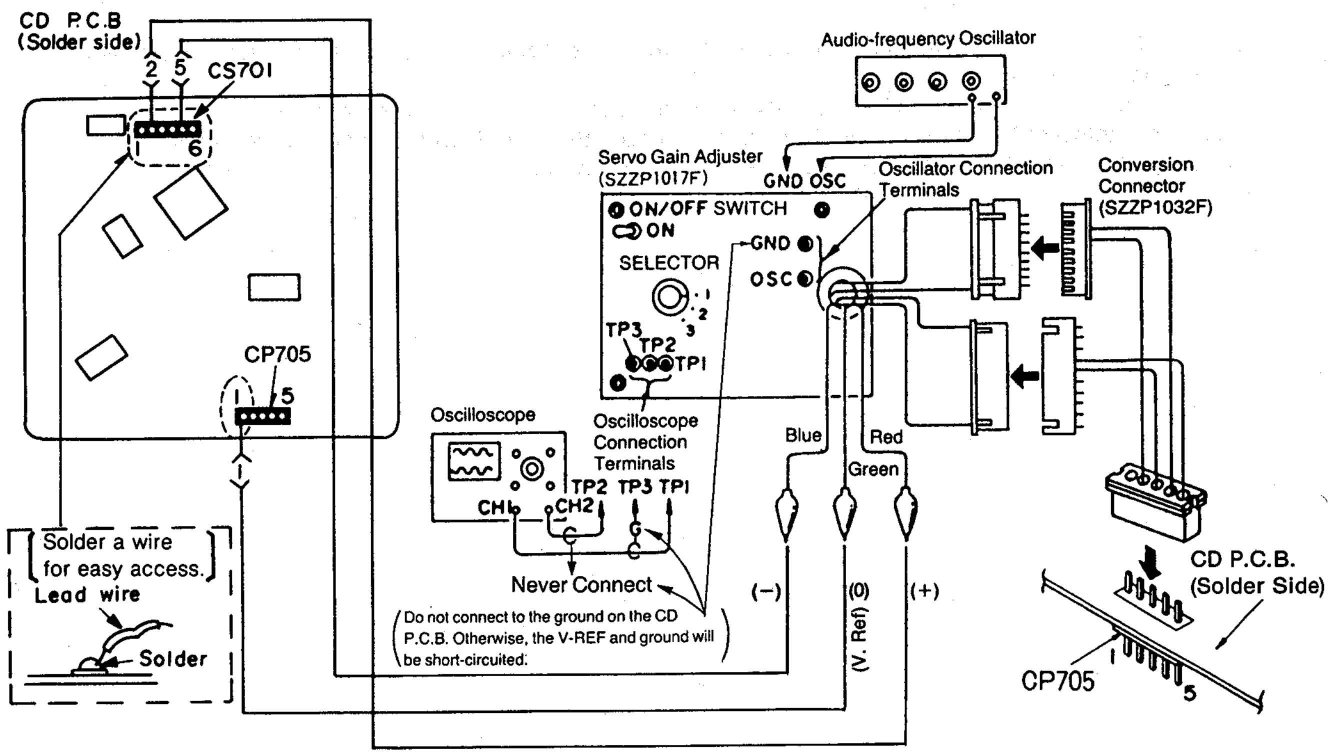
ELECTRICAL ADJUSTMENTS

Measuring Instruments and Special Tools

* Servo gain adjuster (SZZP1017F or SZZP1094C-1)
* Test discs
  1. Playability test disc (SZZP1054C)
  2. Uneven test disc (SZZP1056C)
  3. Black band test disc (SZZP1057C)
* Normal disc
* Dual-beam oscilloscope with bandwidth of 30MHz or better (with EXT. trigger and 1 : 1 probe).
* Audio-frequency (AF) oscillator
* Conversion connector (SZZP1032F)
* Lead wire (for test points)
* Allen wrench (M2.0) (SZZP1101C)
* DC voltmeter

• CONNECTING THE SERVO GAIN ADJUSTER

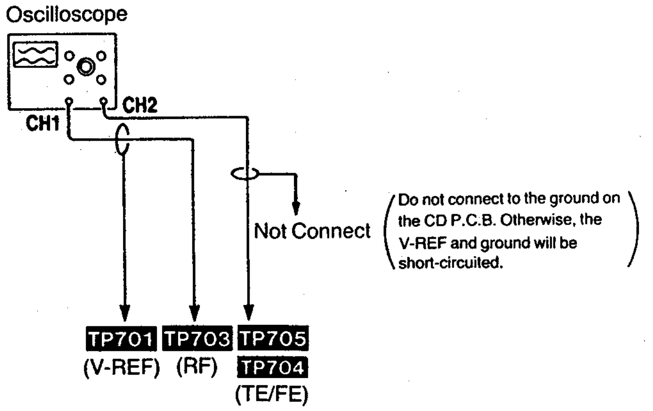
(Tracking gain, focus gain and tracking balance adjustment)


CD P.C.B
(Solder side)
2
5
CS701
6
CP705
5
Solder a wire
for easy access.
Lead wire
Solder
Audio-frequency Oscillator
Servo Gain Adjuster
(SZZP1017F)
GND OSC
Oscillator Connection
Terminals
Conversion
Connector
(SZZP1032F)
ON/OFF SWITCH
ON
SELECTOR
1
2
3
GND
OSC
TP3
TP2
TP1
Oscilloscope
Oscilloscope
Connection
Terminals
TP2 TP3 TP1
CH1
CH2
Never Connect
Blue
Red
Green
(−)
(0)
(V. Ref)
(+)
CD P.C.B.
(Solder Side)
CP705
1
5

(Do not connect to the ground on the CD P.C.B. Otherwise, the V-REF and ground will be short-circuited.)

• CONNECTING THE OSCILLOSCOPE

(Mechanical adjustment and adjustment of the best eye, focus offset, tracking offset and tracking balance)


Oscilloscope
CH1
CH2
Not Connect
TP701
TP703
TP705
(V-REF)
(RF)
TP704
(TE/FE)

(Do not connect to the ground on the CD P.C.B. Otherwise, the V-REF and ground will be short-circuited.)

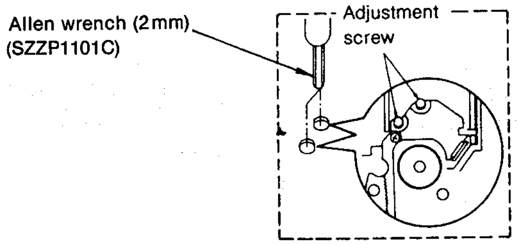
CAUTION:

1. TP3 and GND terminal on the SZZP1017F and TP4, chassis of SZZP1017F are all same V-Ref potential.
2. During adjustment, never connect CH-2 probe's GND to any place for it may short Vref line.
   (Connect CH-1 probe's GND to specified TP described in each section.)

(1) MECHANICAL ADJUSTMENT

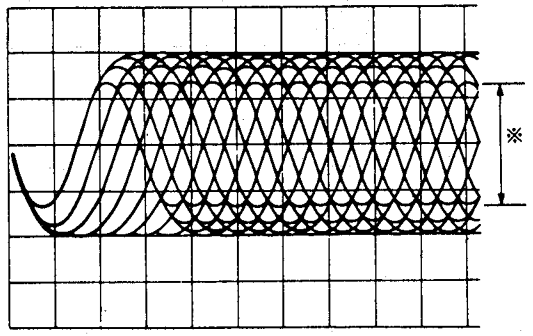
- When the traverse deck is replaced, making adjustments is not necessary. (The traverse deck ass'y is already adjusted.)
- Make adjustments to improve playability if the traverse deck has not been replaced.

1. Connect CH1 of the oscilloscope to TP703 (RF) and TP701 (V. Ref.) of the CD P.C.B.
   Oscilloscope setting:VOLT........200mV
   SWEEP.....0.2μsec
   INPUT.......AC
2. Turn **ON** the power switch of the player and insert the test disc (SZZP1056C)and play Track No. 5.


Allen wrench (2mm)
(SZZP1101C)
Adjustment
screw

Note: The mechanical adjustment screws have been locked with screw lock paint at the factory.
They might be hard to turn.

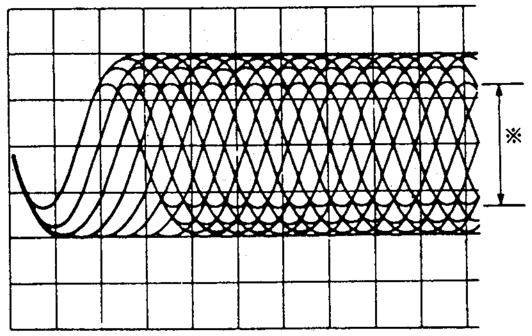
3. Monitoring RF signal on the oscilloscope, adjust **the two adjusting screws** alternatelywith the 2mm Allen wrench (SZZP1101C) so that the vertical fluctuation of RF signal is minimized and the eye pattern is most stretched.
4. Turn **OFF** the power switch of the player.
5. After adjustment , apply **screw lock paint(RZZ0L01)** to the adjusting screws.



※ Most stretched eye pattern.

(2) BEST EYE (PD BALANCE) ADJUSTMENT

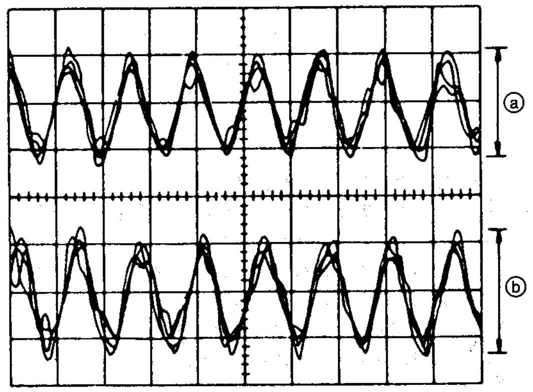
1. Connect the oscilloscope's CH. 1 probe across TP703 (+) and TP701 (−) on the CD P.C.B.
   Oscilloscope setting:
   VOLT .... 200 mV
   SWEEP .... 0.2 μs.
   Input coupling .... AC
2. Switch the player power **ON**, and play the 1kHz (track1) on the test disc (SZZP1054C).
3. Adjust **VR701** untill the vertical fluctuation of RF signal is minimized and the eye pattern most stretched.



*Most stretched eye pattern.

(3) FOCUS GAIN ADJUSTMENT

1. Connect the servo gain adjuster to the player (see page 45).
2. Set the servo gain adjuster's gain switch to position **"2"** and the ON/OFF switch to **ON**.
3. Set up the AF oscillator output for **1 kHz, 150 mVp-p**, and connect it across the OSC and GND terminals on the servo gain adjuster.
4. Connect oscilloscope's CH. 1 and CH. 2 probes to the servo gain adjuster's TP1 and TP2 terminals, respectively
   (CH. 1 prove (−) to TP3 Terminal).
   Oscilloscope setting:
   VOLT ....50 mV (both channels)
   SWEEP .... 1 msec.
   Input coupling .... AC
5. Play the test disc (SZZP1054C).
6. Set the servo gain adjuster's gain switch to position "3", and you will see a 1 kHz signal on the oscilloscope. Adjust **VR704** until the signal amplitudes on both channels become identical to each other.
7. Set the gain switch back to position **"2"**.



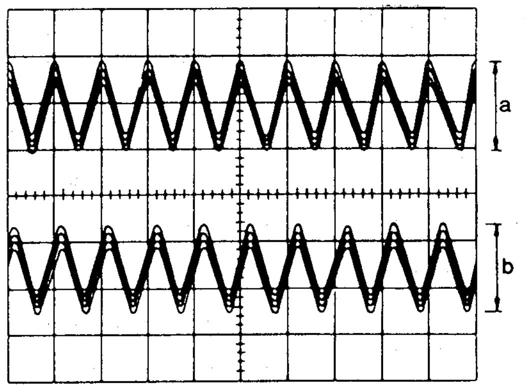
*Adjust **VR704** untilⓐ equals ⓑ.

(4) TRACKING GAIN ADJUSTMENT

1. Set up the AF oscillator output for **1 kHz, 150 mVp-p,** and connect it across the OSC and GND terminals on the servo gain adjuster.
2. Connect oscilloscope's CH. 1 and CH. 2 probes to the servo gain adjuster's TP1 and TP2 terminals, respectively

   Oscilloscope setting:

   VOLT .... 50 mV (both channels)
   SWEEP .... 1 msec.
   Input coupling .... AC
3. Switch the player power **ON**, and play the test disc (SZZP1054C).
4. Set the servo gain adjuster's gain switch to position **"1"**, and you will see a 1 kHz signal on the oscilloscope. Adjust **VR705** until the signal amplitudes on both channels become identical to each other.
5. Set the gain switch back to position **"2"**.



※Adjust **VR705** until a equals b.

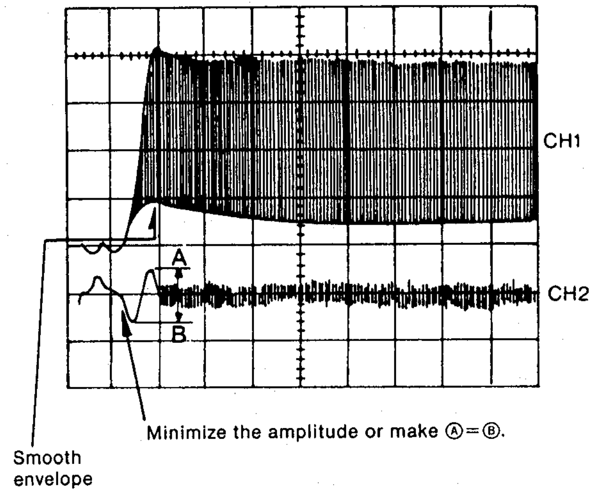
(5) FOCUS OFFSET ADJUSTMENT

Note: Make sure that the servo gain adjuster's gain switch is set to position **"2"**.

1. Connect the oscilloscope's CH. 1 probe across TP703 (+) and TP701 (−) on the CD P.C.B. and CH. 2 probe to TP705 (+).

   Oscilloscope setting:

   VOLT .... 200 mV (CH. 1)
   1 V (CH. 2)
   SWEEP .... 1 ms.
   Input coupling .... AC (both CH. 1 and 2)
   Trigger mode .... NORM (trigger CH. 1)
2. Switch the player power **ON**, and play the **9** on the test disc (SZZP1057C).
3. Trigger the oscilloscope's CH. 1 so that the following waveforms are observed. Adjust **VR703** until the dip in the RF signal envelope on CH. 1 is smooth and the signal amplitude on CH.2 is minimized, i.e. when amplitude Ⓐ equals amplitude Ⓑ.



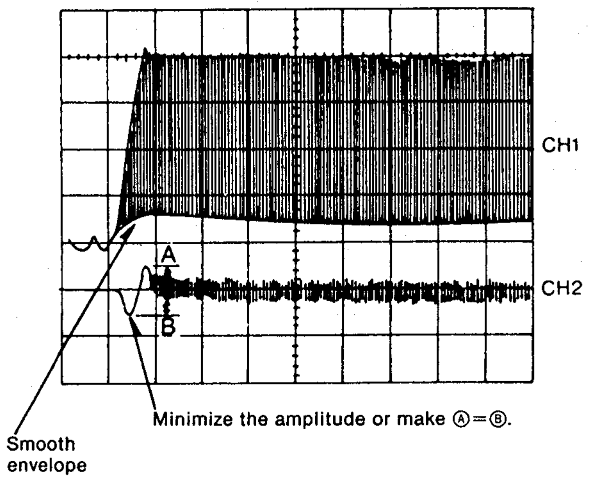
(6) TRACKING OF OFFSET ADJUSTMENT

Note: Make sure that the servo gain adjuster's gain switch is set to position **"2"**.

1. Connect the oscilloscope's CH. 1 probe across TP703 (+) and TP701 (−) on the CD P.C.B. and CH. 2 probe to TP704 (+).

   Oscilloscope setting:

   VOLT .... 200 mV (CH. 1)
   1 V (CH. 2)
   SWEEP .... 0.5 ms.
   Input coupling .... AC (both CH. 1 and 2)
   Trigger mode .... NORM (trigger CH. 1.)
2. Switch the player power **ON**, and play rack **5** on the test disc (SZZP1057C).
3. Trigger the oscilloscope's CH. 1 so that the following waveforms are observed. Adjust **VR706** until the dip in the RF signal envelope on CH. 1 is smooth and the signal amplitude on CH. 2 is minimized, i.e. when amplitude Ⓐ equals amplitude Ⓑ.

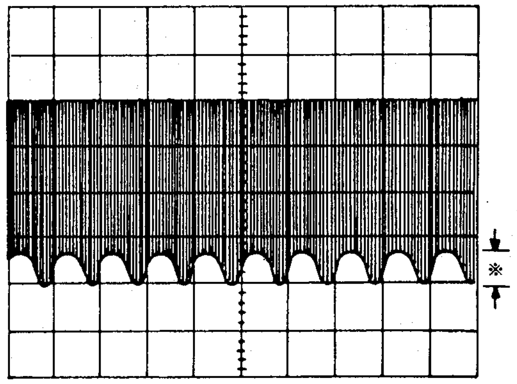


(7) TRACKING BALANCE ADJUSTMENT

1. Make sure that servo gain adjuster's gain switch is set to position **"2"**.
2. Set up the AF oscillator output for **1 kHz, 150 mVp-p,** and connect it across the OSC and GND terminals on the servo gain adjuster.
3. Connect oscilloscope's CH. 1 probe across TP703 (+) and TP701 (−) on the CD P.C.B. and CH. 2 probe (+) to the OSC terminal on the servo gain adjuster.

   Oscilloscope setting:

   VOLT .... 200 mV (CH. 1)
   SWEEP .... 1 msec.
   Input coupling .... AC (both CH. 1 and 2)
   Trigger mode .... NORM (trigger CH. 2)
4. Switch the player power **ON**, and play the test disc (SZZP1014F or SZZP1054C).
5. Adjust the **VR702** so that the section of the output of the waveform marked with ※ is balanced.
6. Disconnect the servo gain adjuster's leads from the player.



※ This section of the waveform must be balanced.

(8) CHECK OF PLAY OPERATION AFTER ADJUSTMENT

*** Checking Skip Search**

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

*** Checking Manual Search**

1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

*** Checking Using Defect Disc**

1. Play the 0.7 mm black dot and the 0.7 mm wedge on the defect test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

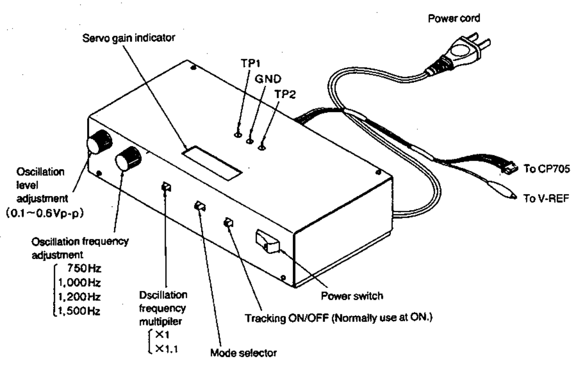
■ NEW SERVO GAIN ADJUSTER (Servo Amp. Adjusting Fixture)

The following introduces the improved version of the current servo gain adjuster (SZZP1017F):

Part number: SZZP1094C-1

Features:

(1) Contains all oscillation frequencies and output adjustments needed for focus servo gain, tracking servo gain, and tracking balance adjustment (requires no external oscillator).
(2) Panel indicators indicate the best points of focus and tracking servo gains (no oscilloscope needed).
(3) Internal power supply eliminates the need for power supply from the CD player.


Power cord
Servo gain indicator
TP1
GND
TP2
To CP705
To V-REF
Oscillation level adjustment (0.1~0.6Vp-p)
Oscillation frequency adjustment
750Hz
1,000Hz
1,200Hz
1,500Hz
Dscillation frequency multipiler
×1
×1.1
Mode selector
Tracking ON/OFF (Normally use at ON.)
Power switch

FUNCTION OF IC TERMINALS

• IC704 (MN6625): Digital signal processor

Pin No.	Mark	I/O Division	Function
1	BYTCK	O	Serial data byte clock (Not used, open)
2	FCLK	O	Crystal frame clock (7.35kHz) (Not used, open)
3	DEMPH	O	De-emphasis ON signal (de-emphasis ON at "H")
4	SRDATA	O	Serial data output (MSB first)
5	SCK	O	Serial bit clock output
6	LRCK	O	LR discrimination signal output
7	WDCK	O	Serial data output word clock
8	LDG	O	L channel deglitch signal (Not used, open)
9	RDG	O	R channel deglitch signal (Not used, open)
10	IPFLAG	O	Interpolation flag (interpolation at "H")
11	FLAG	O	Error flag terminal
12	XCK	O	Clock (16.9344MHz) output (Not used, open)
13	TEST	I	Test mode selection (Not used, connected to power supply.)
14	TX	O	Digital signal output (Not used, open)
15	SLEEP	I	Mode selector ("L": normal, "H": SLEEP mode) (Not used, connected to GND)
16	CSEL	I	Test terminal ("L": normal) (Not used, connected to GND)
17	X1	I	Clock input (16.9344MHz)
18	X2	O	Clock output (16.9344MHz) (Not used, open)
19	VSS	—	GND terminal
20	BLKCK	O	Sub-code block (Q data) clock (75Hz)
21	$\overline{\text{CLDCK}}$	O	Sub-code frame (Q data) clock (7.35kHz)
22	$\overline{\text{SUBQ}}$	O	Sub-code (Q data) output
23	$\overline{\text{RST}}$	I	Reset signal input (reset at "L")
24	MLD	I	Command load signal input
25	MCLK	I	Command clock signal input
26	MDATA	I	Command data input
27	DMUTE	I	Muting control
28	$\overline{\text{TRON}}$	I	Tracking servo ON signal (tracking servo ON at "L")
29	STAT	O	Processing condition (CRC, CUE, CLVS, TT STOP, FCLV)
30	SUBC	O	Sub-code serial output data (Not used, open)
31	SBCK	I	Clock for sub-code serial output (Not used, open)
32	SMCK	O	Clock output (4.2336MHz)
33	VDD	I	Power supply
34	MEMP	I	Emphasis signal input (Not used, open)
35	FG	I	Spindle motor FG signal input (Not used, open)
36	PC	O	Spindle motor ON signal (ON at "L")
37	EC	O	Spindle motor drive signal
38	RESY	O	Resynchronizing signal (Not used, open)
39	DO	I	Drop-out signal (Drop-out at "H")
40	SRF	I	EFM signal input (DSL)
41	EFM	I	EFM signal input (PLL)
42	PCK	I	PLL extract clock input (4.3218MHz)
43	FPC	O	PLL frequency comparision signal
44 ~ 51	D7 ~ D0	I/O	16K RAM data input/output
52	RAM/OE	O	16K RAM $\overline{\text{OE}}$ signal
53	RAM/WE	O	16K RAM $\overline{\text{WE}}$ signal
54 ~ 64	RAM/A0 ~ RAM/A10	O	16K RAM address signal (RAMA0: LSB, RAMA10: MSB)

• IC801 (M50932-179FP): System control & LCD drive

Pin No.	Mark	I/O Division	Function
1 ~ 9	S0 ~ S8	O	Segment signal output
10	NC	—	Not used
11 ~ 13	COM0 ~ COM2	O	LCD common signal output
14 ~ 16	VL1 ~ VL3	I	Power input terminals for LCD driver.
17	V_{CC}	—	+5V input terminal
18	CNTR	I/O	Time operate input/output signal
19	PWR CTRL	I/O	Power control signal
20	CLK	I	Sub code frame (Q data) clock (7.35kHz)
21	NC	—	Not used
22	SUB Q	I	Sub code (Q data) input
23	TUNE IND	I	Tuning indication signal
24	P32	I	Backup (5V) terminal
25	P31	I	Clock terminal (32.768kHz)
26	P32	O	
27	BLKCK	I	Sub-code block (Q data) clock input (75Hz)
28	CNV_{SS}	—	Connected V_{SS} terminal
29	RESET	I	Reset signal input
30	X_{IN}	I	Clock terminal (4MHz)
31	X_{OUT}	O	
32	V_{SS}	—	GND terminal
33	CE	O	PLL control signal output
34	DI	O	
35	CL	O	
36	P24	O	Input select signal
37	P22	O	
38	ST IND	I	Stereo indication signal
39	POWER	—	Power input terminal
40	STATAS	I	Processing status input from signal processor LSI
41	AF MUTE	O	AF mute command signal
42	TR REV	O	Traverse "Reverse" command signal
43	TR FWD	O	Traverse "Forward" command signal
44	CNT 4	O	Optical servo IC control signal (Kick direction [Reverse] command)
45	CNT 3	O	Optical servo IC control signal (Kick direction [Forward] command)
46	CNT 2	O	Optical servo IC control signal (Tracking servo)
47	CNT 1	O	Optical servo IC control signal (Focus servo)
48	FLOCK	I	Optical servo condition (Focus) input
49	SENSE	I	Optical servo condition (Track cross) input
50	MLD	O	Command load output
51	MDATA	O	Command data output
52	MCLK	O	Command clock output
53 ~ 56	P_{00} ~ P_{03}	I	Key scan data signal input (4-bit)
57 ~ 64	P_{40} ~ P_{47}	I	Key scan data signal input (8-bit)
65 ~ 72	S16 ~ S23	O	Segment signal output
73	V_{SS}	—	GND terminal
74 ~ 80	S_9 ~ S_{15}	O	Segment signal output

■ REPLACEMENT PARTS LIST

Notes :
- * Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
- * The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
  Parts without these indications can be used for all areas.
- * 🄼 Indicates in Remarks columns parts that are supplied by MESA.
- * Warning: This product uses a laser diode. Refer to caution statements on page 2.

ACHTUNG:
- • Die lasereinheit nicht zerlegen.
- • Die lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC1	RVITA7358P	IC, FM FRONT END	
IC2	RVIBA4236L	IC, FM/AM IF AMP	
IC3	RVIBA1332L	IC, FM MPX	
IC4	LM7001	IC, PLL FREQUENCY	
IC301	BA15218N-DX	IC, OP. AMP	
IC302	BA3310N	IC, REC AMP	
IC303	BA7755	IC, R/P SELECT	
IC304, 305	BU4066B	IC, INPUT SELECT	
IC306	TC9312AN-082	IC, MECHA. CONT.	
IC307	AN7134N	IC, POWER AMP	
IC308	BA3920	IC, POWER SUPPLY	
IC309	S81250HGT	IC, REGULATOR	
IC310	BA6137	IC, ATLS	🄼
IC501	RVIBA3822LS	IC, G. EQUALIZER	
IC551	BA6218	IC, MOTOR SW	
IC801	M50932-179FP	IC, SYSTEM CONT/LCD	
IC802	S8054HN-T	IC, RESET SIGNAL	
IC803	M50253P	IC, SYSTEM CONT.	
IC971	DN6851A	IC, HALL	
		TRANSISTOR(S)	
Q1	2SC1047CTA	TRANSISTOR	
Q2	2SC829BTA	TRANSISTOR	
Q3-6	2SA720S	TRANSISTOR	
Q7	2SC829BTA	TRANSISTOR	
Q8-10	RVTDTA143XST	TRANSISTOR	
Q11	2SC1740SSTA	TRANSISTOR	
Q12, 13	2SC1684HS	TRANSISTOR	
Q14, 15	2SC1740SLNRT	TRANSISTOR	
Q16, 17	2SC1684RTA	TRANSISTOR	
Q101	2SC2001L1TA	TRANSISTOR	
Q102, 103	2SC1740SSTA	TRANSISTOR	
Q104	RVTDTC143XST	TRANSISTOR	
Q105	2SJ40CTA	TRANSISTOR	
Q106	RVTDTC143XST	TRANSISTOR	
Q151, 152	2SC1740SLNRT	TRANSISTOR	
Q201	2SC2001L1TA	TRANSISTOR	
Q202, 203	2SC1740SSTA	TRANSISTOR	
Q204	RVTDTC143XST	TRANSISTOR	
Q205	2SJ40CTA	TRANSISTOR	
Q206	RVTDTC143XST	TRANSISTOR	
Q251, 252	2SC1740SLNRT	TRANSISTOR	
Q301	2SC1740SLNRT	TRANSISTOR	
Q304	RVTDTA143XST	TRANSISTOR	
Q305	2SC1740SQTA	TRANSISTOR	
Q306	RVTDTA143XST	TRANSISTOR	
Q307	2SC1740SQTA	TRANSISTOR	
Q308	2SC1740SRTA	TRANSISTOR	
Q309	2SC1740SSTA	TRANSISTOR	
Q310	2SC2001L1TA	TRANSISTOR	
Q311	2SC2001K1TA	TRANSISTOR	
Q312	2SC1740SRTA	TRANSISTOR	
Q314	RVTDTC143XST	TRANSISTOR	
Q320	2SB621RTA	TRANSISTOR	
Q321	RVTDTC143XST	TRANSISTOR	
Q322	2SB621RTA	TRANSISTOR	
Q323	RVTDTC143XST	TRANSISTOR	
Q324-327	RVTDTA114EST	TRANSISTOR	
Q328	RVTDTC143XST	TRANSISTOR	
Q329	2SB1311Q	TRANSISTOR	
Q330	2SC1740SRTA	TRANSISTOR	
Q351	RVTDTA114EST	TRANSISTOR	
Q352	RVTDTC143XST	TRANSISTOR	
Q353	2SJ40CTA	TRANSISTOR	
Q401, 402	RVTDTC143XST	TRANSISTOR	
Q550, 551	2SC1740SRTA	TRANSISTOR	
Q552	RVTDTA114TST	TRANSISTOR	
Q553	RVTDTC143XST	TRANSISTOR	
Q555	RVTDTA114TST	TRANSISTOR	
Q556	RVTDTC143XST	TRANSISTOR	
Q801-803	RVTDTA114EST	TRANSISTOR	
Q804	RVTDTC114EST	TRANSISTOR	
Q805, 806	RVTDTC114TST	TRANSISTOR	
Q807	2SC1740SSTA	TRANSISTOR	
Q808	RVTDTA114EST	TRANSISTOR	
Q809	2SC1740SSTA	TRANSISTOR	
Q810	RVTDTA114EST	TRANSISTOR	
Q811	2SC1740SSTA	TRANSISTOR	
Q812, 813	RVTDTC114TST	TRANSISTOR	
Q815	2SC1740SSTA	TRANSISTOR	
Q816, 817	RVTDTC114TST	TRANSISTOR	
		DIODE(S)	
D1, 2	1SV147T4MATU	DIODE	
D3	RVD1SS133TA	DIODE	
D4-7	RVDSVC321	DIODE	
D8, 9	RVD1SS133TA	DIODE	
D10	RVDMTZ5R6BTA	DIODE	
D11-13	RVD1SS133TA	DIODE	
D14	RVDMTZ11BTA	DIODE	
D15, 16	RVD1SS133TA	DIODE	
D101	RVD1SS133TA	DIODE	
D103	RVD1SS133TA	DIODE	
D201	RVD1SS133TA	DIODE	
D203	RVD1SS133TA	DIODE	
D301	RVD1SS133TA	DIODE	
D302	RVDMTZ7R5BTA	DIODE	
D303-312	RVD1SS133TA	DIODE	
D313	RVDMTZ10BTA	DIODE	
D316	MA723TA	DIODE	
D318	RVD1SS133TA	DIODE	
D320	RVDMTZ6R8BTA	DIODE	
D321-324	RVDP300DLF	DIODE	
D401, 402	SLR33MC160	LED(GREEN), REV. FWD	🄼
D403	SLR33VC160	LED(RED), REC PAUSE	🄼
D404-409	RVD1SS133TA	DIODE	
D551	RVD1SS133TA	DIODE	
D552	SLT25VR124	L. E. D	🄼
D554	SLT25VR124	L. E. D	🄼
D555	RVD1SS133TA	DIODE	
D801-803	RVD1SS133TA	DIODE	
D804	SL25VR70F155	L. E. D	🄼
D805-810	RVD1SS133TA	DIODE	
D812-816	RVD1SS133TA	DIODE	
D818-824	RVD1SS133TA	DIODE	
D825	SLB25VR124	L. E. D	🄼
D826	SL25VR70F155	LED(RED), POWER/BATT	🄼
D827, 828	RVD1SS133TA	DIODE	
D830	RVD1SS133TA	DIODE	
D831	RVDMTZ6R8BTA	DIODE	
D971	RVD1SS133TA	DIODE	
		I. C. PROTECTOR	
IP301	RAHICPN15TA	IC PROTECTOR	
IP302	RAHICPN10TA	IC PROTECTOR	
IP303, 304	RAHICPN5TA	IC PROTECTOR	
		VARIABLE RESISTOR(S)	
VR1	EVNDXAA00B14	V. R, FM MPX VCO	
VR501	EWC07A027C54	V. R, VOLUME	🄼
VR502	EWAGU3C14G15	V. R, BALANCE	🄼
VR503-507	EWAGQ6C14G54	V. R, GRAPHIC EQ.	🄼
		COIL(S)	
L4	RLF6W14-0	COIL, F. ANT	🄼
L5	RL02B125-M	COIL, AM. OSC	🄼
L6	RL01B15-M	COIL, LW OSC	🄼
L7	RL09B18-M	COIL, DC-DC CONV	
L8	RLQZP221KT-Y	COIL, RF CHOKE	
L9	RLQZP101KT-Y	COIL, RF CHOKE	
L10	RLQZP221KT-Y	COIL, RF CHOKE	
L11	RLQZP2R2KT-Y	COIL, RF CHOKE	
L101, 201	RLQZB272KT-D	COIL, RF CHOKE	🄼
L301	RL08R7-T	COIL, BIAS OSC	🄼
L302, 303	RLQZB470KT-D	COIL, RF CHOKE	
L304, 305	RLQZP100KT-Y	COIL, RF CHOKE	
L306, 307	RLQZB220KT-D	COIL, RF CHOKE	⚠
L501, 502	RLQV472K-Z	COIL, RF CHOKE	
L600	RLQY30S1W-0	COIL, RF CHOKE	(E)
L801-808	RLQZP2R2KT-Y	COIL, RF CHOKE	
		TRANSFORMER(S)	
T1	RLI4B153-M	TRANSFORMER, FM IFT	
T2	RLI2B468-M	TRANSFORMER, AM IFT	🄼
T3	RLI4B153-M	TRANSFORMER, FM IFT	
T301	RLT5L5G4B-X	TRANSFORMER, POWER	(E, EG) ⚠ 🄼
T301	RLT5L5A4A-X	TRANSFORMER, POWER	(EB) ⚠🄼
		TRIMMER	
CT1	ECRLA010A53R	TRIMMER	
CT2	RCV10AF1T-S	TRIMMER	
CT3	ECRLA030E53R	TRIMMER	
		COMPONENT COMBINATION(S)	
Z1	RXABPMB6AT	B. P. F., FM	
Z801	RSL5019-L	LCD	🄼
Z802	A1QH3029H0	COMPONENT COMBINATION	
		FILTER(S)	
CF1	RLFFETWNA01L	CERAMIC FILTER, FM	
CF2	RVFSFZ459HL3	CERAMIC FILTER, AM	🄼
		OSCILLATOR(S)	
X1	SVQ49U722-S	OSCILLATOR, 7.2MHz	
X801	RSXD32K7S01	OSCILLATOR, 32.768KHz	🄼
X802	RVBCSA4R0MGT	OSCILLATOR, 4MHz	
		FUSE(S)	
F301	XBA2C31TB0K	FUSE(125V, 4A)	⚠🄼
		SWITCH(ES)	

Ref. No.	Part No.	Part Name & Description	Remarks
S301	RSS2A56ZA-H	SW, BEAT PROOF	🄼
S302	RJJ1A5ZC-H	SW, AC IN/W. J303	⚠
S303	ESB6483	SW, XBS	🄼
S401	RSS3A18YA-H	SW, REVERSE MODE	
S402	EVQ21405R	SW, REC PAUSE	
S403	EVQ21405R	SW, FWD PLAY	
S404	EVQ21405R	SW, REV PLAY	
S405	EVQ21405R	SW, FAST (▶▶)	
S406	EVQ21405R	SW, FAST (◀◀)	
S407	EVQ21405R	SW, STOP	
S801	EVQ21405R	SW, TUNER/BAND	
S802	EVQ21405R	SW, CD	
S803	EVQ21405R	SW, "1"	
S804	EVQ21405R	SW, "7"	
S805	EVQ21405R	SW, AUX	
S806	EVQ21405R	SW, TUNNING (-)	
S807	EVQ21405R	SW, REPEAT	
S808	EVQ21405R	SW, ATLS	
S809	EVQ21405R	SW, "2"	
S810	EVQ21405R	SW, "8"	
S811	EVQ21405R	SW, TAPE	
S812	EVQ21405R	SW, TUNNING (+)	
S813	EVQ21405R	SW, CANCEL	
S814	EVQ21405R	SW, "3"	
S815	EVQ21405R	SW, "9"	
S816	EVQ21405R	SW, OPERATION	
S817	EVQ21405R	SW, PLAY/STOP	
S818	EVQ21405R	SW, "4"	
S819	EVQ21405R	SW, "10"	
S820	EVQ21405R	SW, PAUSE/E. P	
S821	EVQ21405R	SW, "5"	
S822	EVQ21405R	SW, PROGRAM	
S823	EVQ21405R	SW, SKIP/SEARCH (▶▶/▶▶I)	
S824	EVQ21405R	SW, "6" (I◀◀/◀◀)	
S825	EVQ21405R	SW, "+10"	
S826	EVQ21405R	SW, SKIP/SEARCH	
S827	RSS3A24ZA-H	SW, FM MODE/B. P	
S828	RSH1A64ZA-U	SW, OPEN/CLOSE	
S829	RSH1A64ZA-U	SW, LASER STOP	
S971	RSH1A89ZA-U	SW, MODE	
S972	RSH1A90YA-U	SW, CASSETTE HALF DELECT	
S973	RSH1A90YA-U	SW, REV REC INHIBIT	
S974	RSH1A90YA-U	SW, FWD REC INHIBIT	
S975	RSH1A90YA-U	SW, ATS/CrO2	
		JACK (S)	
J301	RJJ1D25ZA-C	MIC JACK	
J302	RJJD7S2YA-C	H. P JACK	
J303	RJJ1A5ZC-H	AC IN JACK/W. S302	⚠
J304	RJF1099YA	AUX IN JACK	
J305	RJJB3ZD-C	DC IN JACK	

Ref. No.	Part No.	Part Name & Description	Remarks
J600	RJS1A4702	ANTENNA JACK	(E) 🄼
		CONNECTOR AND SOCKET	
CP1	RJP2G18ZA	CONNECTOR (2P)	(E)
CP301	RJP5G18ZA	CONNECTOR (5P)	
CP600	RJP2G18ZA	CONNECTOR (2P)	(E)
CS1	RJS7T4ZA	SOCKET (7P)	
CS301	RJS2T6ZA	SOCKET (2P)	🄼
CS302	RJS9T7ZA	SOCKET (9P)	
CS303	RJS9T4ZA	SOCKET (9P)	
CS304	RJS4T6ZA	SOCKET (4P)	
CS305	RJS9T4ZA	SOCKET (9P)	
CS306	SJT30243-V	CONNECTOR (2P)	
CS307	RJS2T6ZA	SOCKET (2P)	🄼
CS801	RJS11T4ZA	SOCKET (11P)	
CS802	RJS7T4ZA	SOCKET (7P)	
CS803	RJS12T4ZA	SOCKET (12P)	

Notes : * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
* 🄼 Indicates in Remarks columns parts that are supplied by MESA.
* Warning: This product uses a laser diode. Refer to caution statements on page 2.

ACHTUNG: • Die lasereinheit nicht zerlegen.
• Die lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

Ref. No.	Part No.	Part Name & Description	Remarks
1	EAS16P431A-G	SPEAKER	🄼
2	RFKGDS660PAK	SP FRONT CAB. ASS'Y (R)	🄼
2A	RAF25E4M03-T	TWEETER	🄼
3	RHG2152ZA	CORD BUSHING	🄼
4	RJE297YA	SP CORD	🄼
5	RKF971YD-0	SP BACK CABINET (R)	🄼
6	XTV3+10G	SCREW	
7	XTV3+20GFY	SCREW	
8	RFKGDS660PBK	SP FRONT CAB. ASS'Y (L)	🄼
8A	RAF25E4M03-T	TWEETER	🄼
9	RKF971ZD-0	SP BACK CABINET (L)	🄼
10	RHR193ZA	CONNECTOR (6P)	
11	RHR194ZA	CONNECTOR (7P)	
12	RHR196ZA	CONNECTOR (9P)	
13	RHR198ZA	CONNECTOR (11P)	
14	RHR199ZA	CONNECTOR (12P)	
15	RJC511ZBS	BATTERY SPRING	🄼
16	RJC70031YA	BATTERY SPRING	🄼
17	RJF28ZA	FUSE HOLDER	⚠
18	RHR3401ZB	SOUND ABSORBING MATERIAL	🄼
19	RKE651ZA-0	HANGER	🄼
21	RJF1098ZA-H	SP TERMINAL	🄼
22	RWJ0103080KK	FLAT CABLE (3P)	🄼
23	RMY0039	HEAT SINK	🄼
24	RSC0099	SHIELD PLATE	🄼
25	RWJ0206210QQ	FLAT CABLE (6P)	🄼
26	RWJ0207110QQ	FLAT CABLE (7P)	🄼
27	RWJ0209090QQ	FLAT CABLE (9P)	🄼
28	RWJ1111110QQ	FLAT CABLE (11P)	🄼
29	RWJ1112110QQ	FLAT CABLE (12P)	🄼
30	RWJ1803250KK	FLAT CABLE (3P)	🄼
31	RWJ1804150KQ	FLAT CABLE (4P)	🄼
32	XTW3+10F	SCREW	
33	XTW3+8F	SCREW	
34	RGU0339A-K	CD 10KEY BUTTON	🄼
35	RHR197ZA	CONNECTOR (10P)	
36	RHR3399ZA	LEAF SWITCH COVER	🄼
40	RMC1239ZBA	IC SHIELD PLATE	🄼
41	RSC0093	SHIELD PLATE (REAR)	🄼
42	RSC0098	SHIELD PLATE	🄼
43	RSC0100	SHIELD PLATE (UP)	🄼
44	RJB0349D	P. C. B, BATTERY	(E) 🄼
44	RJB0349E	P. C. B, BATTERY	(EG, EB) 🄼
45	RWJ0209200QQ	FLAT CABLE (9P)	🄼
46	RWJ1110090QQ	FLAT CABLE (10P)	🄼
47	RWJ1112090QQ	FLAT CABLE (12P)	

Ref. No.	Part No.	Part Name & Description	Remarks
48	XTV26+8G	SCREW	
49	RMC1235ZAA	SHIELD PLATE (UP)	🄼
50	RJB0350D	P. C. B, SWITCH	🄼
51	RWJ1107170QQ	FLAT CABLE (7P)	🄼
52	RBD567XA-0	SLIDE VR KNOB	🄼
53	RBD572ZA-0	SLIDE KNOB	🄼
54	RGV0043-K	FM MODE KNOB	🄼
55	RGW0067A-K	VR KNOB	🄼
56	RKK317YA-0	BATTERY COVER	🄼
57	RMC1257ZA	TRANS SHIELD	🄼
58	RSC0094	TRANS SHIELD PLATE	🄼
59	RSC0097	TRANS SHIELD	🄼
60	XTN3+10CFZ	SCREW	
61	XTN3+20CFZ	SCREW	
62	XTV3+10G	SCREW	
63	XTV3+12G-M	SCREW	
64	XTV3+20G	SCREW	
65	XWT3	WASHER	
66	RGK0235A-H	10-KEY ORNAMENT	🄼
68	RGU0338A-H	FUNCTION BUTTON	🄼
69	RGU0341-K	C-MECH EJECT BUTTON	🄼
70	RML0155	EJECT LEVER ARM	🄼
71	RFKGXDS660EC	FRONT CABINET ASS'Y	🄼
72	RDG5782YC	GEAR	🄼
73	RUW170YAA	OPEN SPRING	🄼
74	RFKRXDS660PK	CASSETTE HOLDER ASS'Y	🄼
75	RFKLDS660PAK	CASSETTE LID ASS'Y	🄼
76	RHG782ZA	RUBBER FOR HANDLE	🄼
77	RFKHXDS660EK	REAR CABINET ASS'Y	(E) 🄼
77	RFKHXDS660EB	REAR CABINET ASS'Y	(EB) 🄼
77	RFKHXDS660EG	REAR CABINET ASS'Y	(EG) 🄼
77A	RMA0283	TERMINAL	🄼
77B	RGN0216A-K	NAME PLATE	(EB) 🄼
77B	RGN0216C-K	NAME PLATE	(EG) 🄼
77B	RGN0216B-K	NAME PLATE	(E) 🄼
78	RFKNDS660PAK	HANDLE ASS'Y	🄼
79	XEARR175FA-Y	TELESOPIC ANTENNA	
80	XYN3+F12FY	SCREW	
81	RBC1412ZA-0	CD EJECT BUTTON	🄼
82	RDG5782YC	GEAR	🄼
83	RKE653ZA-0	TOP CABINET	🄼
84	RUL1136ZA	CD EJECT LEVER	🄼
85	RUS780ZA	CD BUTTON SPRING	🄼
86	XTW3+10P	SCREW	
87	RGX1807ZA-0	CD ORNAMENT	🄼
88	RHM245ZA	MAGNET	

Ref. No.	Part No.	Part Name & Description	Remarks
89	RME502ZB	FIXTURE	🄼
90	RUW217ZA	OPEN SPRING	🄼
91	RFKNDS620PBK	CLAMPER ASS'Y	🄼
92	RFKLDS660PBK	CD LID ASS'Y	🄼
99	RMS0123	SHAFT	🄼
100	RMK0051	CHASSIS	🄼
102	RWJ0209090QQ	FLAT CABLE (9P)	🄼
103	RUL9010ZA	REINFORCE ANGLE	🄼
104	SODD101-3Z	TRAVERSE ASS'Y	
104A	SHGD112	RUBBER	
104B	SHGD113-1	RUBBER	
105	RUA867ZB	HOLDER	
106	RMB0017-2	SPRING	🄼
107	XQN17+C3	SCREW	
108	RDG5953ZC	GEAR	
109	RDG5954ZA	GEAR	
110	RMR0261	LED HOLDER	🄼
111	RJC93006	SPRING	🄼
112	RGU0271	XBS KNOB	🄼
113	RUD129XA	SPRING	
114	RFM156ZA	VOLUME MOTOR ASS'Y	
115	REX0231	LEAD WIRE ASS'Y	(E)🄼
116	XTB26+20G	SCREW	(E)🄼
117	REX0230	LEAF SW WIRE	🄼
		MECHANISM PARTS	
		CASSETTE DECK	
201	RXQ0007	HEAD BLOCK (REC./PLAYBACK)	
202	RUA793ZE	HEAD BASE	
203	RZLAR300A	ROD	
203A	RUW143ZA	SPRING	
204	1UB0089ZA	ARM	
204A	RUW148ZA	SPRING	
205	1DM0018ZA	REEL TABLE (R)	
206	1DM0017ZA	REEL TABLE (F)	
207	RML0069-1	LEVER	
208	RDG5772ZC	GEAR	
209	RUB508ZB	BRAKE ROD	
210	RUB506ZB	LEVER	
211	1UB0088ZA	ARM(R)ASS'Y, PINCH ROLLER	
211A	RUW141ZA	SPRING	
212	1UB0087ZA	ARM(F)ASS'Y, PINCH ROLLER	
212A	RUW140ZB	SPRING	
213	RUB507ZD	EJECT ROD (R)	
214	RNL1ZD	DAMPER ARM	
215	RUB503ZD	MAIN LEVER	
216	RFKRAA0320	CHASSIS	
217	RUW142ZA	SPRING	
218	RUD105ZA	SPRING	
219	RUW144ZA	SPRING	
220	RUW139ZA	SPRING	

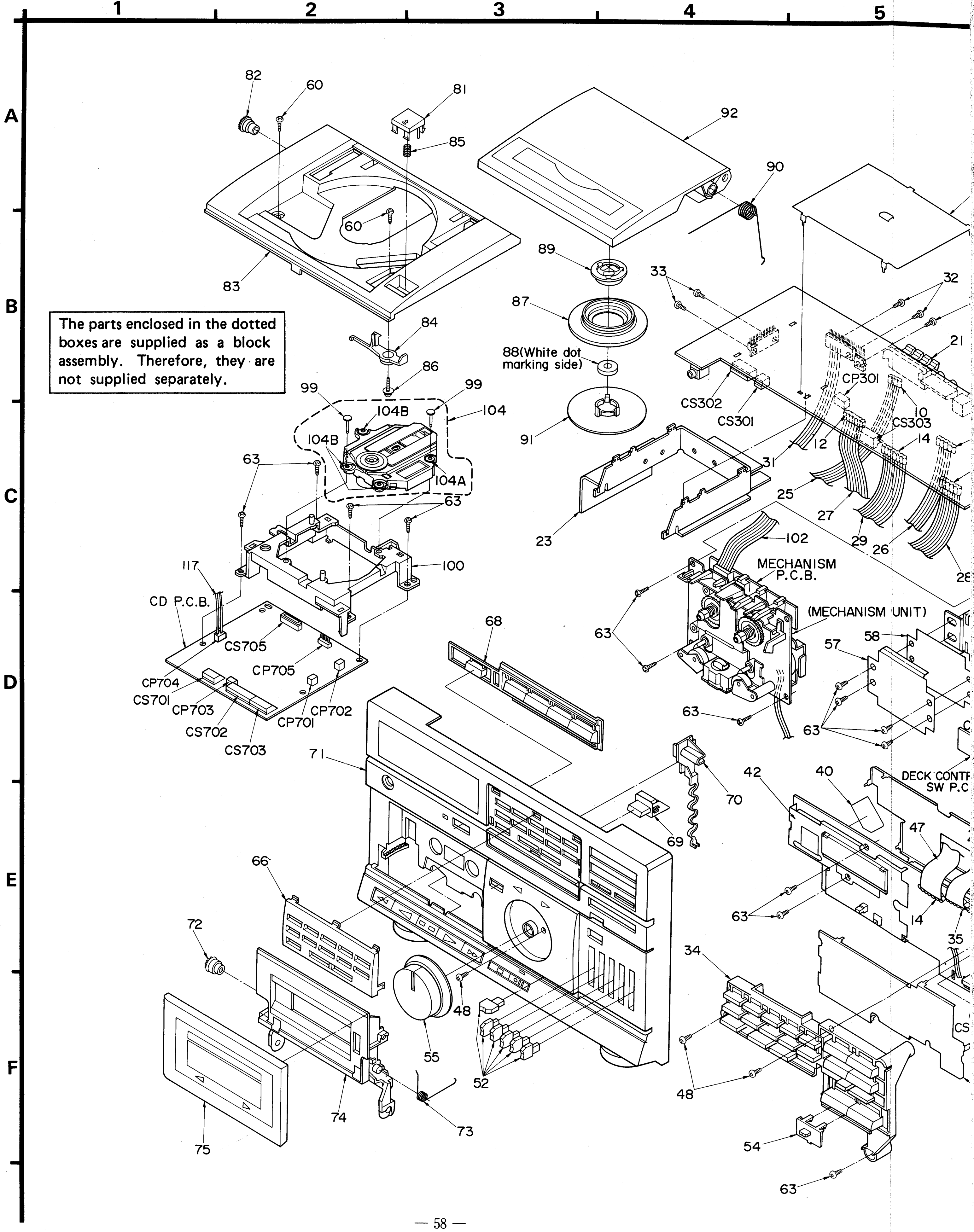
Ref. No.	Part No.	Part Name & Description	Remarks
221	RFM173ZA	DC MOTOR	
222	1UE0015ZA	PLUNGER	
223	RUB428ZE	SHAFT	
224	RUL1030ZC	ANGLE	
225	RMD5014ZC	ANGLE	
226	RDG5927ZG	GEAR	
227	1DW0037ZB	FLYWHEEL (F)	
227A	RNW139ZA	WASHER	
228	1DW0038ZB	FLYWHEEL (R)	
228A	RNW138Z	WASHER	
229	1DG0006ZA	REEL TABLE GEAR	
230	RUB513ZD	ARM	
231	1UB0091ZA	LEVER	
231A	RUW146ZA	SPRING	
232	1DR0011ZA	MAIN PULLEY	
233	RDV90ZB	BELT	
234	RDG5769ZA	REEL TABLE GEAR	
235	RUQ111ZB	SPRING	
236	RUW145ZA	SPRING	
237	1UB0090ZA	ROD	
237A	RUB512ZB	ROD	
238	RDG5773ZB	GEAR	
239	RUQ112ZA	SPRING	
240	RUS609ZC	TAPE PRESSURE SPRING	
241	RUB514ZC	LEVER	
242	RUW147ZA	SPRING	
243	RUB515ZA	LEVER	
244	RUB509ZA	LEVER	
245	RDV100ZA	CAPSTAN BELT	
249	RHG3032ZA	RUBBER CUSHION	
250	RNL180ZB	DAMPER ARM	
251	REX0174-1	LEAD WIRE ASS'Y	🄼
261	XTW2+6L	SCREW	
262	XTW2+8L	SCREW	
263	XTN26+7J	SCREW	
264	RHE5203ZA	SCREW	
265	XTW2+8S	SCREW	
266	XYC2+JF16	SCREW	
267	RHD26002	SCREW	
268	RJS9T7ZA	CONNECTOR (9P)	
		PACKING MATERIAL	
P1	RPH3SZA	SHEET	🄼
P2	RPK0170	GIFT BOX	🄼
P3	RPN0292	PAD	🄼
		ACCESSORIES	
A1	RFKSXDS660EK	INST. MANUAL	(E)🄼
A1	RQT0590-G	INST. MANUAL	(EB, EG)🄼
A2	RJA20ZD-K	AC CORD	⚠(E, EG)

Ref. No.	Part No.	Part Name & Description	Remarks
A2	RJA86ZB-K	AC CORD	⚠(EB)
A3	RAK-RX303EM	REMOTE CONTROL ASS'Y	🄼
A4	RKK0008-KE	BATTERY COVER	🄼
	TRAVERSE UNIT		
		INTEGRATED CIRCUITS	
IC701	AN8373SE2	IC, CD SERVO SYSTEM	
IC702	AN8374SE2	IC, PWM DRIVE/PLL	
IC703	AN8377N	IC, MOTOR DRIVE	
IC704	MN6625	IC, SIGNAL PROCESS	
IC705	LC3517BMLTP	IC, DE INTERLEAVE	
IC706	TA8410P	IC, MOTOR DRIVE	
IC707	SM5807ESE2	IC, DIGTAL FILTER	
IC708	UPD6376GSE2	IC, D/A CONVERTER	
		TRANSISTORS	
Q701	2SA1309STA	TRANSISTOR	
Q703	UN4110TA	TRANSISTOR	
Q704, 705	UN4216TA	TRANSISTOR	
		DIODES	
D707, 708	MA165TA	DIODE	
		VARIABLE RESISTORS	
VR701	EVNDXAA00B14	V. R, BEST EYE ADJ.	
VR702	EVNDXAA00B24	V. R, TRACKING BAL. ADJ.	
VR703	EVNDXAA00B14	V. R, FOCUS OFFSET ADJ.	
VR704	EVNDXAA00B14	V. R, FOCUS GAIN ADJ.	
VR705	EVNDXAA00B14	V. R, TRACKING GAIN ADJ.	
VR706	EVNDXAA00B14	V. R, TRACKING OFFSET ADJ.	
		OSCILLATOR	
X701	RSXZ16M9M01T	OSCILLATOR	
		SWITCH	
S701	SSHD5-E	SW, REST	
		CONNECTOR AND SOCKET	
CP701-703	RJP2G18ZA	PLUG (2P)	
CP704	RJP2G17ZA	PLUG (2P)	
CP705	RJP5G35ZA	PLUG (5P)	
CS701	RJS6T7ZA	SOCKET (6P)	
CS702	RJS12T7YA	SOCKET (12P)	
CS703	RJS10T7ZA	SOCKET (10P)	
CS705	RJS16Q11ZA	SOCKET (16P)	

Ref. No.	Part No.	Part Name & Description	Remarks
		RESISTORS	
R701	ERDS2TJ472T	C. RESISTOR 1/4W 4.7K	
R702	ERDS2TJ103T	C. RESISTOR 1/4W 10K	
R705	ERDS2TJ103T	C. RESISTOR 1/4W 10K	
R706	ERDS2TJ823T	C. RESISTOR 1/4W 82K	
R707	ERDS2TJ123T	C. RESISTOR 1/4W 12K	
R708	ERDS2TJ683T	C. RESISTOR 1/4W 68K	
R710	ERDS2TJ333T	C. RESISTOR 1/4W 33K	
R711	ERDS2TJ105T	C. RESISTOR 1/4W 1M	
R712, 713	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R715	ERDS2TJ222T	C. RESISTOR 1/4W 2.2K	
R716	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R717	ERDS2TJ104T	C. RESISTOR 1/4W 100K	
R720	ERDS2TJ120T	C. RESISTOR 1/4W 12	
R721	ERDS2TJ471T	C. RESISTOR 1/4W 470	
R722	ERDS2TJ222T	C. RESISTOR 1/4W 2.2K	
R723	ERDS2TJ682T	C. RESISTOR 1/4W 6.8K	
R725	ERDS2TJ103T	C. RESISTOR 1/4W 10K	
R726	ERDS2TJ562T	C. RESISTOR 1/4W 5.6K	
R727	ERDS2TJ332T	C. RESISTOR 1/4W 3.3K	
R728	ERDS2TJ682T	C. RESISTOR 1/4W 6.8K	
R732	ERDS2TJ562T	C. RESISTOR 1/4W 5.6K	
R733	ERDS2TJ473T	C. RESISTOR 1/4W 47K	
R735	ERDS2TJ392T	C. RESISTOR 1/4W 3.9K	
R736	ERDS2TJ472T	C. RESISTOR 1/4W 4.7K	
R737	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R738	ERDS2TJ104T	C. RESISTOR 1/4W 100K	
R740	ERDS2TJ471T	C. RESISTOR 1/4W 470	
R741	ERDS2TJ102T	C. RESISTOR 1/4W 1K	
R742	ERDS2TJ104T	C. RESISTOR 1/4W 100K	
R743	ERDS2TJ471T	C. RESISTOR 1/4W 470	
R745	ERDS2TJ470T	C. RESISTOR 1/4W 47	
R746	ERDS2TJ223T	C. RESISTOR 1/4W 22K	
R748	ERDS2TJ222T	C. RESISTOR 1/4W 2.2K	
R749	ERDS2TJ224T	C. RESISTOR 1/4W 220K	
R750-752	ERDS2TJ562T	C. RESISTOR 1/4W 5.6K	
R755	ERDS2TJ223T	C. RESISTOR 1/4W 22K	
R760	ERDS2TJ562T	C. RESISTOR 1/4W 5.6K	
		CAPACITORS	
C701	ECEA0JU471B	E. CAPACITOR 6.3V 470	
C702	ECEA1AU221B	E. CAPACITOR 10V 220	
C703, 704	ECFR1C104MR	. CAPACITOR 16V 0.1	
C705	ECEA1CN100SB	E. CAPACITOR 16V 10	
C706	ECFR1C104MR	. CAPACITOR 16V 0.1	
C707	ECEA0JU101B	E. CAPACITOR 6.3V 100	
C708	ECBT1H681KB5	. CAPACITOR 50V 680P	
C710	ECEA1HU010B	E. CAPACITOR 50V 1	
C711	ECBT1H390J5	. CAPACITOR 50V 39P	

Ref. No.	Part No.	Part Name & Description	Remarks
C712	ECEA1HU010B	E. CAPACITOR 50V 1	
C713	ECEA1HN010SB	E. CAPACITOR 50V 1	
C715	ECFR1C333KR	. CAPACITOR 16V 0.033	
C716	ECEA1HN010SB	E. CAPACITOR 50V 1	
C717	ECFR1C333KR	. CAPACITOR 16V 0.033	
C718	ECBT1H102KB5	. CAPACITOR 50V 1000P	
C720	ECEA1HNR47SB	E. CAPACITOR 50V 0.47	
C721	ECFR1C683MR	. CAPACITOR 16V 0.068	
C722	ECEA1HNR47SB	E. CAPACITOR 50V 0.47	
C723	ECEA1AN220SB	E. CAPACITOR 10V 22	
C725	ECFR1C104MR	. CAPACITOR 16V 0.1	
C726	ECQV1H334JZ3	P. CAPACITOR 50V 0.33	
C727	ECQV1H474JZ3	P. CAPACITOR 50V 0.47	
C728	ECEA1CU220B	E. CAPACITOR 16V 22	
C730	ECEA1CU220B	E. CAPACITOR 16V 22	
C733	ECBT1H270J5	. CAPACITOR 50V 27P	
C735	ECBT1H270J5	. CAPACITOR 50V 27P	
C736	ECBT1H104ZF5	. CAPACITOR 16V 0.1	
C737	ECEA0JU471B	E. CAPACITOR 6.3V 470	
C738	ECEA1CU100B	E. CAPACITOR 16V 10	
C741	ECBT1C103MR5	. CAPACITOR 16V 0.01	
C742	ECEA0JU101B	E. CAPACITOR 6.3V 100	
C743	ECBT1H104ZF5	. CAPACITOR 50V 0.1	
C747	ECBT1C332MR5	. CAPACITOR 16V 3300P	
C748	ECFR1C333KR	. CAPACITOR 16V 0.033	
C750	ECEA0JU101B	E. CAPACITOR 6.3V 100	
C751	ECFR1C333KR	. CAPACITOR 16V 0.033	
C752	ECEA1HUR33B	E. CAPACITOR 50V 0.33	
C753, 755	ECEA1HPS010B	E. CAPACITOR 50V 1	
C756	ECBT1C332MR5	. CAPACITOR 16V 3300P	
C757	ECEA1CU100B	E. CAPACITOR 16V 10	
C758	ECFR1C104MR	. CAPACITOR 50V 0.1	
C760	ECFR1C104MR	. CAPACITOR 16V 0.1	
C761	ECEA0JU471B	E. CAPACITOR 6.3V 470	
C762, 763	ECBT1H471KB5	. CAPACITOR 50V 470P	

■CABINET PARTS LOCATION (See parts list on pages 54 and 55.)


1
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A
B
C
D
E
F
82
60
81
85
92
90
60
83
89
33
32
87
21
84
88(White dot marking side)
86
CS302
CP301
99
99
104B
104
91
CS301
10
CS303
104B
14
63
104A
12
31
63
25
27
23
102
29
26
28
117
100
MECHANISM P.C.B.
CD P.C.B.
(MECHANISM UNIT)
68
63
58
57
CS705
CP705
CP704
CS701
CP703
CP701
CP702
CS702
CS703
63
63
71
42
40
DECK CONTR SW P.C
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CS
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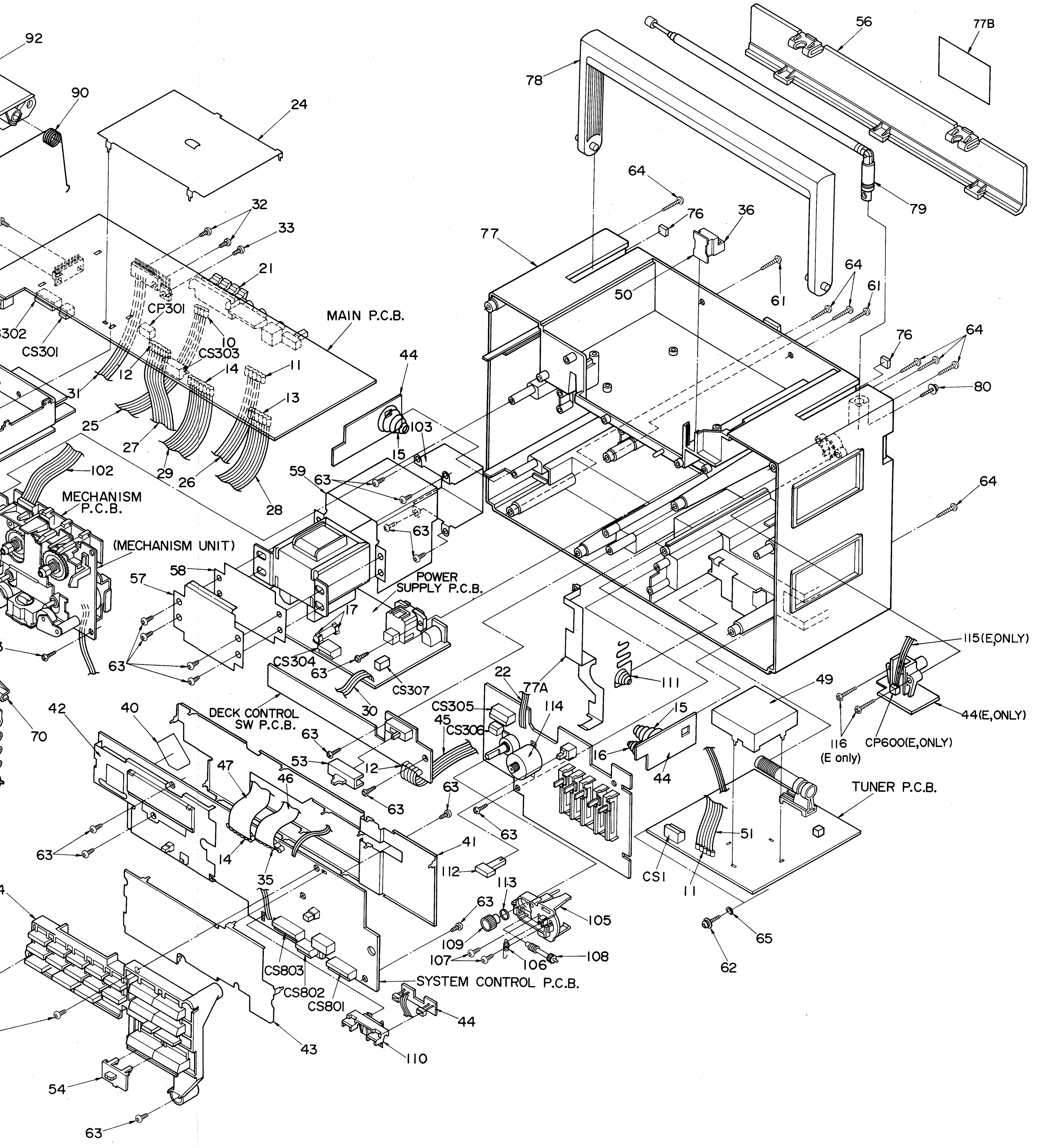
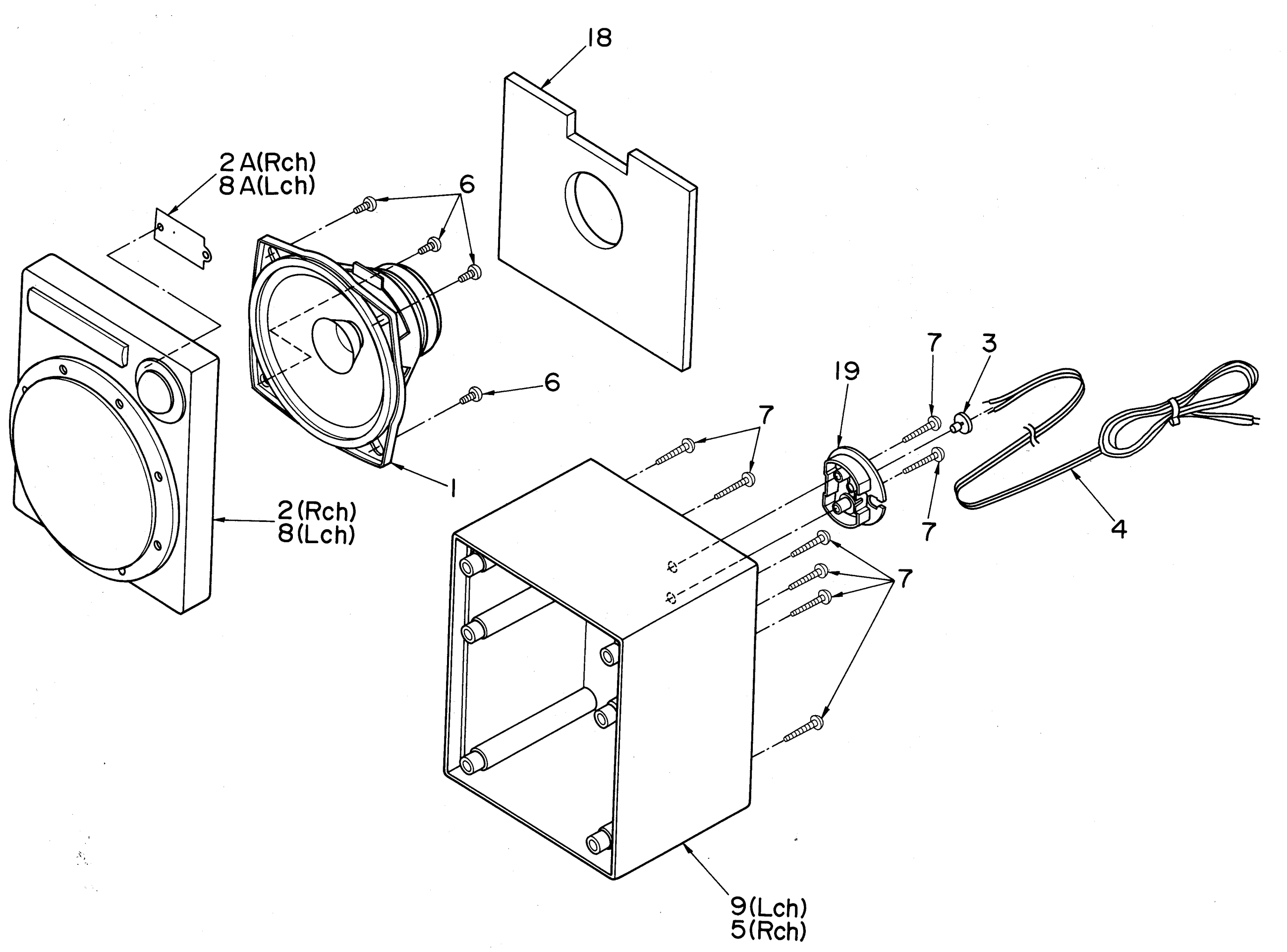
The parts enclosed in the dotted boxes are supplied as a block assembly. Therefore, they are not supplied separately.

55.)

5 6 7 8 9 10 11 12 13 14


92
90
24
32
33
21
MAIN P.C.B.
302
CS301
CP301
10
CS303
14
11
13
12
31
25
27
29
26
28
102
MECHANISM P.C.B.
(MECHANISM UNIT)
44
103
15
59
63
63
58
57
POWER SUPPLY P.C.B.
17
63
CS304
63
CS307
30
70
42
40
DECK CONTROL SW P.C.B.
63
53
12
63
47
46
63
45
CS305
CS306
22
77A
114
63
14
35
41
112
113
63
105
109
107
106
108
CS803
CS802
CS801
SYSTEM CONTROL P.C.B.
44
110
43
54
63
78
64
76
36
77
50
61
64
61
76
64
80
64
56
77B
79
111
15
16
44
49
115(E,ONLY)
116
(E only)
CP600(E,ONLY)
44(E,ONLY)
TUNER P.C.B.
51
CS1
11
65
62

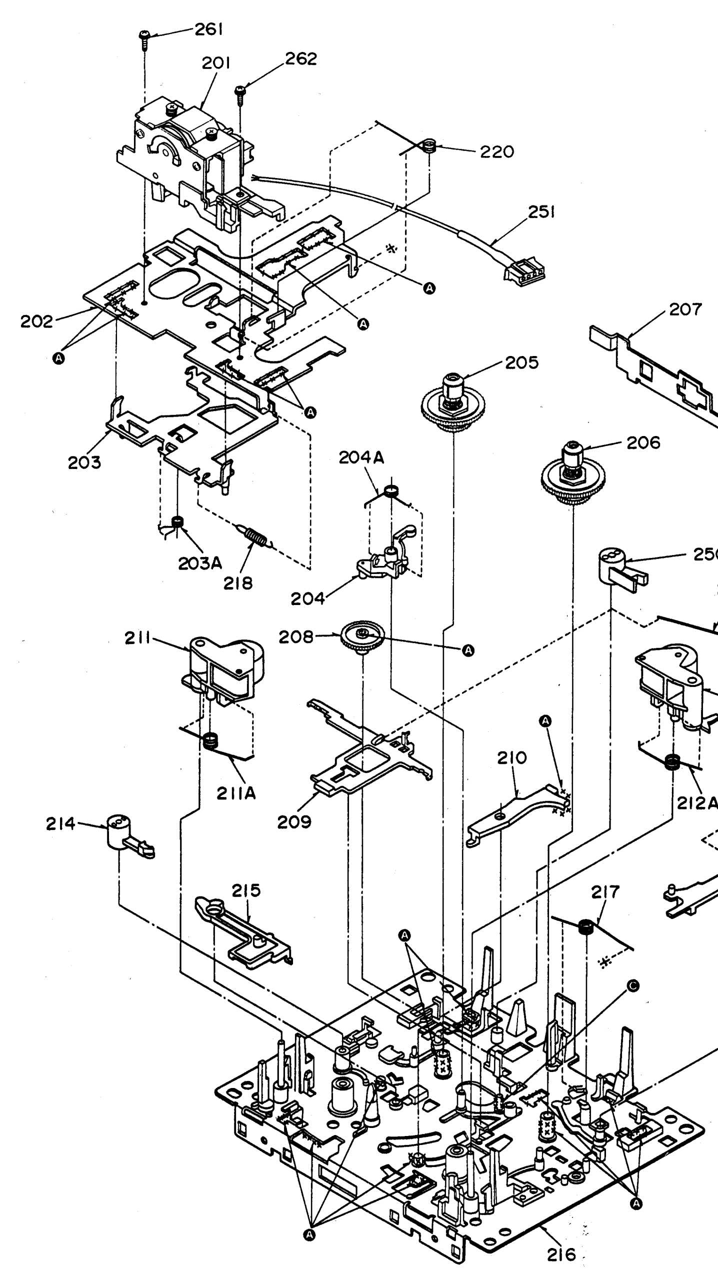

2 A(Rch)
8 A(Lch)
6
18
6
1
2(Rch)
8(Lch)
19
7
3
7
4
7
7
9(Lch)
5(Rch)

■ MECHANISM PARTS LOCATION (See parts list on page 55.)

1 2 3 4 5 6 7 8 9

A B C D E F

(TOP VIEW)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204A
203A
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250
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212A
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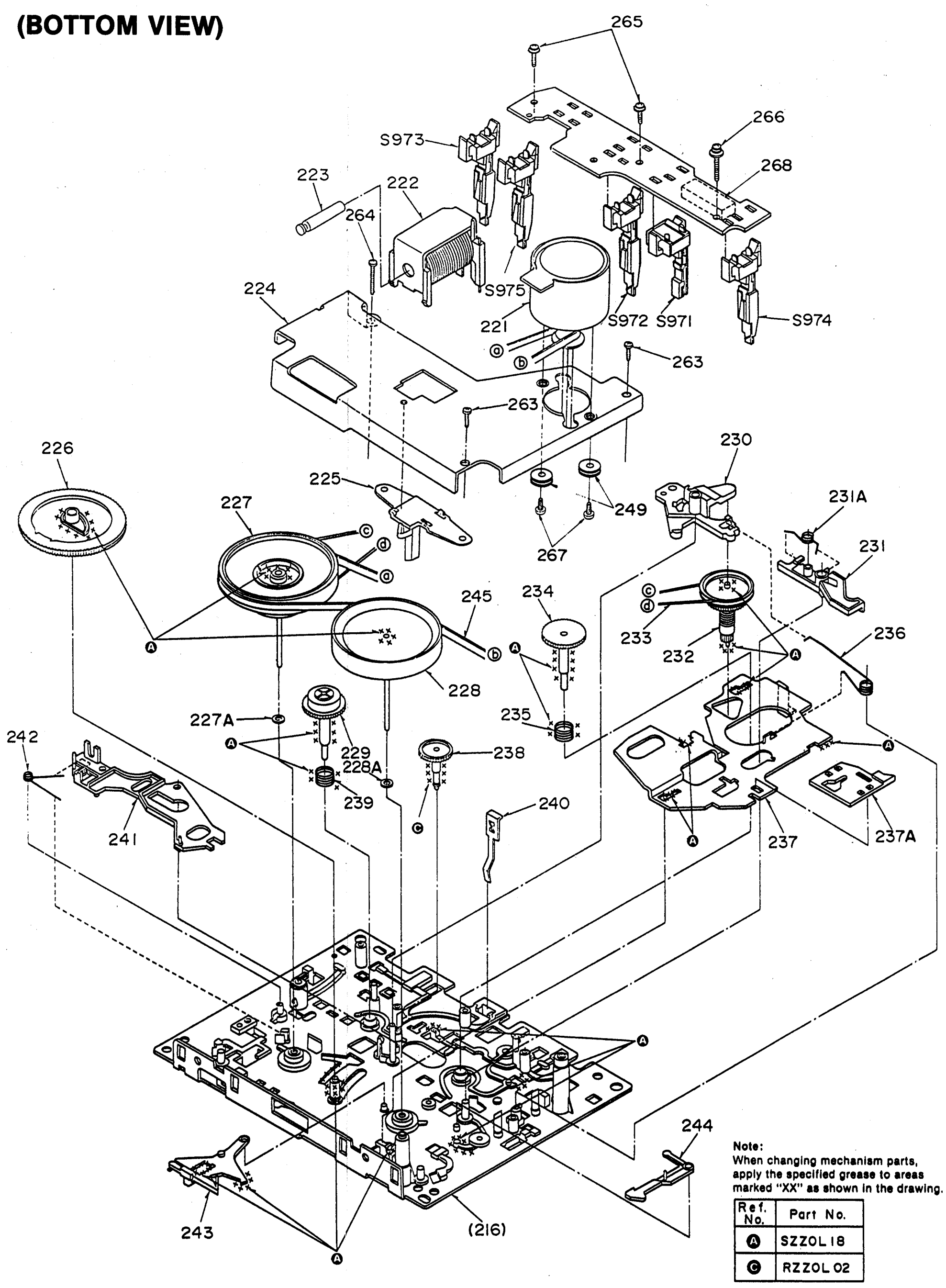
216
Ⓐ
Ⓒ

(BOTTOM VIEW)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S973
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268
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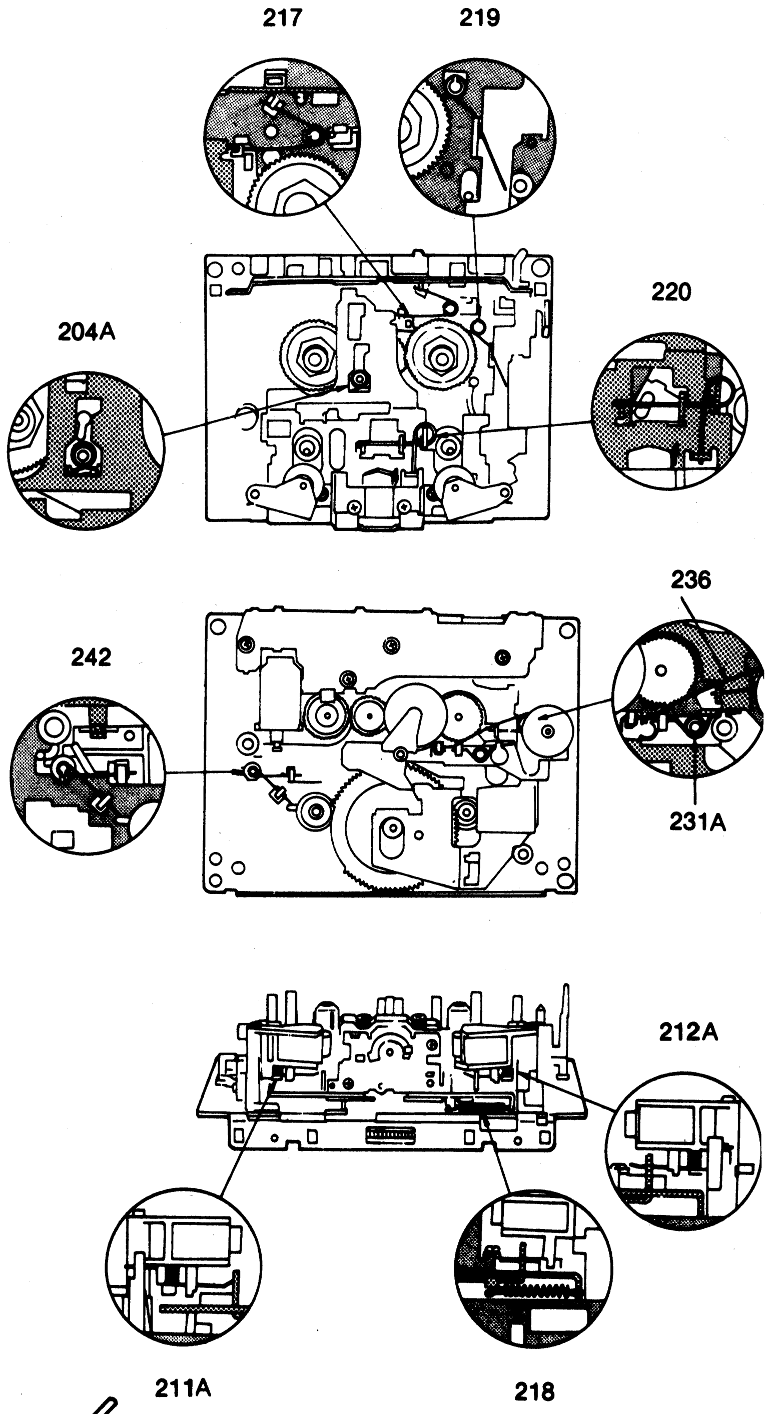
224
S975
221
S972
S971
S974
263
226
225
230
227
249
231A
267
231
245
234
233
232
236
228
242
227A
229
228A
235
238
239
240
241
237
237A
244
243
(216)
Ⓐ
Ⓑ
Ⓒ
Ⓓ

Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

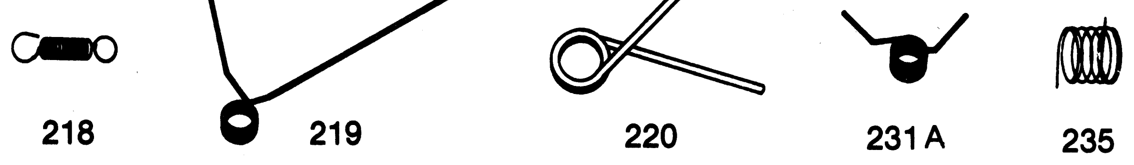
Ref. No.	Part No.
Ⓐ	SZZOL18
Ⓒ	RZZOL02

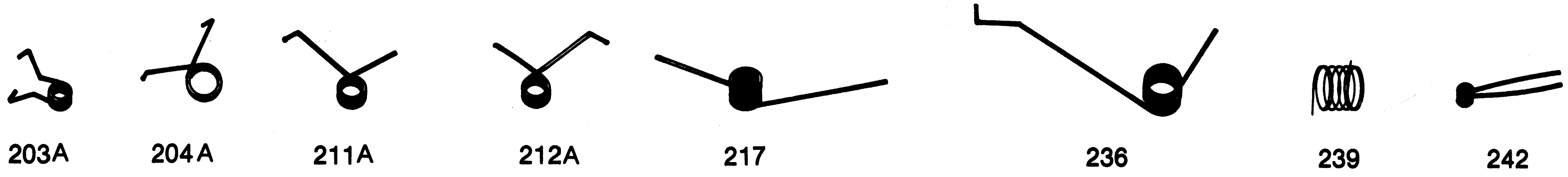
SPRING LOCATION


217
219
204A
220
236
242
231A
212A
211A
218

- **SPRING ILLUSTRATION**

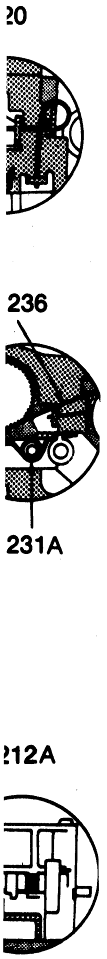
The spring illustration used shows the actual size so it can be used to check the shape of the spring.
(The illustration shows the spring separated from the mechanism.)


218
219
220
231A
235


203A
204A
211A
212A
217
236
239
242

Notes : * Capacity val
* Resistance v

Ref. No.	Part No.	V
		RESI
R1	ERDS2TJ101T	1/4W
R2	ERDS2TJ330T	1/4W
R3, 4	ERDS2TJ104T	1/4W
R5	ERDS2TJ470T	1/4W
R6	ERDS2TJ103T	1/4W
R8	ERDS2TJ683T	1/4W
R9	ERDS2TJ681T	1/4W
R10	ERDS2TJ470T	1/4W
R12	ERDS2TJ332T	1/4W
R13	ERDS2TJ471T	1/4W
R14	ERDS2TJ334T	1/4W
R15	ERDS2TJ331T	1/4W
R16	ERDS2TJ470T	1/4W
R18	ERDS2TJ221T	1/4W
R19	ERDS2TJ392T	1/4W
R20	ERDS2TJ562T	1/4W
R22-25	ERDS2TJ104T	1/4W
R26-29	ERDS2TJ103T	1/4W
R30	ERDS2TJ470T	1/4W
R31	ERDS2TJ153T	1/4W
R32	ERDS2TJ391T	1/4W
R33	ERDS2TJ683T	1/4W
R34	ERDS2TJ151T	1/4W
R35	ERDS2TJ103T	1/4W
R36	ERDS2TJ151T	1/4W
R37	ERDS2TJ102T	1/4W
R38	ERDS2TJ104T	1/4W
R39, 40	ERDS2TJ562T	1/4W
R41	ERDS2TJ102T	1/4W
R42	ERDS2TJ332T	1/4W
R43	ERDS2TJ102T	1/4W
R44	ERDS2TJ683T	1/4W
R45	ERDS2TJ682T	1/4W
R46	ERDS2TJ473T	1/4W
R47	ERDS2TJ102T	1/4W
R48	ERDS2TJ472T	1/4W
R49	ERDS2TJ473T	1/4W
R50	ERDS2TJ563T	1/4W
R51	ERDS2TJ272T	1/4W
R52	ERDS2TJ471T	1/4W
R53	ERDS2TJ104T	1/4W
R54	ERDS2TJ471T	1/4W
R55	ERDS2TJ222T	1/4W
R56	ERDS2TJ473T	1/4W
R57-62	ERDS2TJ103T	1/4W
R91	ERDS2TJ470T	1/4W



Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R1	ERDS2TJ101T	1/4W 100
R2	ERDS2TJ330T	1/4W 33
R3, 4	ERDS2TJ104T	1/4W 100K
R5	ERDS2TJ470T	1/4W 47
R6	ERDS2TJ103T	1/4W 10K
R8	ERDS2TJ683T	1/4W 68K
R9	ERDS2TJ681T	1/4W 680
R10	ERDS2TJ470T	1/4W 47
R12	ERDS2TJ332T	1/4W 3.3K
R13	ERDS2TJ471T	1/4W 470
R14	ERDS2TJ334T	1/4W 330K
R15	ERDS2TJ331T	1/4W 330
R16	ERDS2TJ470T	1/4W 47
R18	ERDS2TJ221T	1/4W 220
R19	ERDS2TJ392T	1/4W 3.9K
R20	ERDS2TJ562T	1/4W 5.6K
R22-25	ERDS2TJ104T	1/4W 100K
R26-29	ERDS2TJ103T	1/4W 10K
R30	ERDS2TJ470T	1/4W 47
R31	ERDS2TJ153T	1/4W 15K
R32	ERDS2TJ391T	1/4W 390
R33	ERDS2TJ683T	1/4W 68K
R34	ERDS2TJ151T	1/4W 150
R35	ERDS2TJ103T	1/4W 10K
R36	ERDS2TJ151T	1/4W 150
R37	ERDS2TJ102T	1/4W 1K
R38	ERDS2TJ104T	1/4W 100K
R39, 40	ERDS2TJ562T	1/4W 5.6K
R41	ERDS2TJ102T	1/4W 1K
R42	ERDS2TJ332T	1/4W 3.3K
R43	ERDS2TJ102T	1/4W 1K
R44	ERDS2TJ683T	1/4W 68K
R45	ERDS2TJ682T	1/4W 6.8K
R46	ERDS2TJ473T	1/4W 47K
R47	ERDS2TJ102T	1/4W 1K
R48	ERDS2TJ472T	1/4W 4.7K
R49	ERDS2TJ473T	1/4W 47K
R50	ERDS2TJ563T	1/4W 56K
R51	ERDS2TJ272T	1/4W 2.7K
R52	ERDS2TJ471T	1/4W 470
R53	ERDS2TJ104T	1/4W 100K
R54	ERDS2TJ471T	1/4W 470
R55	ERDS2TJ222T	1/4W 2.2K
R56	ERDS2TJ473T	1/4W 47K
R57-62	ERDS2TJ103T	1/4W 10K
R91	ERDS2TJ470T	1/4W 47 (E)

Ref. No.	Part No.	Values & Remarks
R101	ERDS2TJ334T	1/4W 330K
R102	ERDS2TJ104T	1/4W 100K
R103	ERDS2TJ330T	1/4W 33
R104	ERDS2TJ332T	1/4W 3.3K
R106	ERDS2TJ272T	1/4W 2.7K
R107	ERDS2TJ103T	1/4W 10K
R109	ERDS2TJ393T	1/4W 39K
R111	ERDS2TJ153T	1/4W 15K
R112	ERDS2TJ822T	1/4W 8.2K
R113	ERDS2TJ470T	1/4W 47
R114	ERDS2TJ391T	1/4W 390
R115	ERDS2TJ104T	1/4W 100K
R116	ERDS2TJ103T	1/4W 10K
R117	ERDS2TJ682T	1/4W 6.8K
R118	ERDS2TJ333T	1/4W 33K
R119	ERDS2TJ103T	1/4W 10K
R120	ERDS2TJ152T	1/4W 1.5K
R121	ERDS2TJ562T	1/4W 5.6K
R130	ERDS2TJ123T	1/4W 12K
R131	ERDS2TJ223T	1/4W 22K
R132	ERDS2TJ473T	1/4W 47K
R133	ERDS2TJ183T	1/4W 18K
R134	ERDS2TJ473T	1/4W 47K
R135	ERDS2TJ153T	1/4W 15K
R136	ERDS2TJ104T	1/4W 100K
R140	ERDS2TJ223T	1/4W 22K
R141	ERDS2TJ2R7T	1/4W 2.7
R142	ERDS2TJ151T	1/4W 150
R151	ERDS2TJ102T	1/4W 1K
R152	ERDS2TJ154T	1/4W 150K
R153	ERDS2TJ102T	1/4W 1K
R154	ERDS2TJ154T	1/4W 150K
R155	ERDS2TJ103T	1/4W 10K
R156	ERDS2TJ104T	1/4W 100K
R157	ERDS2TJ223T	1/4W 22K
R158	ERDS2TJ224T	1/4W 220K
R159, 160	ERDS2TJ472T	1/4W 4.7K
R161	ERDS2TJ222T	1/4W 2.2K
R162, 163	ERDS2TJ102T	1/4W 1K
R164	ERDS2TJ472T	1/4W 4.7K
R165	ERDS2TJ101T	1/4W 100
R201	ERDS2TJ334T	1/4W 330K
R202	ERDS2TJ104T	1/4W 100K
R203	ERDS2TJ330T	1/4W 33
R204	ERDS2TJ332T	1/4W 3.3K
R206	ERDS2TJ272T	1/4W 2.7K
R207	ERDS2TJ103T	1/4W 10K
R209	ERDS2TJ393T	1/4W 39K
R211	ERDS2TJ153T	1/4W 15K

Ref. No.	Part No.	Values & Remarks
R212	ERDS2TJ822T	1/4W 8.2K
R213	ERDS2TJ470T	1/4W 47
R214	ERDS2TJ391T	1/4W 390
R215	ERDS2TJ104T	1/4W 100K
R216	ERDS2TJ103T	1/4W 10K
R217	ERDS2TJ682T	1/4W 6.8K
R218	ERDS2TJ333T	1/4W 33K
R219	ERDS2TJ103T	1/4W 10K
R220	ERDS2TJ152T	1/4W 1.5K
R221	ERDS2TJ562T	1/4W 5.6K
R230	ERDS2TJ123T	1/4W 12K
R231	ERDS2TJ223T	1/4W 22K
R232	ERDS2TJ473T	1/4W 47K
R233	ERDS2TJ183T	1/4W 18K
R234	ERDS2TJ473T	1/4W 47K
R235	ERDS2TJ153T	1/4W 15K
R236	ERDS2TJ104T	1/4W 100K
R240	ERDS2TJ223T	1/4W 22K
R241	ERDS2TJ2R7T	1/4W 2.7
R242	ERDS2TJ151T	1/4W 150
R251	ERDS2TJ102T	1/4W 1K
R252	ERDS2TJ154T	1/4W 150K
R253	ERDS2TJ102T	1/4W 1K
R254	ERDS2TJ154T	1/4W 150K
R255	ERDS2TJ103T	1/4W 10K
R256	ERDS2TJ104T	1/4W 100K
R257	ERDS2TJ223T	1/4W 22K
R258	ERDS2TJ224T	1/4W 220K
R259, 260	ERDS2TJ472T	1/4W 4.7K
R261	ERDS2TJ222T	1/4W 2.2K
R262, 263	ERDS2TJ102T	1/4W 1K
R264	ERDS2TJ472T	1/4W 4.7K
R265	ERDS2TJ101T	1/4W 100
R301	ERDS2TJ334T	1/4W 330K
R302	ERDS2TJ102T	1/4W 1K
R303	ERDS2TJ180T	1/4W 18
R308	ERDS2TJ102T	1/4W 1K
R309	ERDS2TJ682T	1/4W 6.8K
R310	ERDS2TJ223T	1/4W 22K
R311	ERDS2TJ101T	1/4W 100
R312	ERDS2TJ473T	1/4W 47K
R313	ERDS2TJ223T	1/4W 22K
R314	ERDS2TJ101T	1/4W 100
R315	ERDS2TJ2R7T	1/4W 2.7
R316	ERDS2TJ102T	1/4W 1K
R317	ERDS2TJ2R7T	1/4W 2.7
R318	ERDS2TJ102T	1/4W 1K
R319	ERDS2TJ333T	1/4W 33K
R320	ERDS2TJ472T	1/4W 4.7K

Ref. No.	Part No.	Values & Remarks
R321	ERDS2TJ682T	1/4W 6.8K
R322	ERDS2TJ103T	1/4W 10K
R323	ERDS2TJ102T	1/4W 1K
R326	ERDS2TJ472T	1/4W 4.7K
R327	ERDS2TJ104T	1/4W 100K
R328	ERDS2TJ102T	1/4W 1K
R329	ERDS2TJ472T	1/4W 4.7K
R330	ERDS2TJ102T	1/4W 1K
R331	ERDS2TJ681T	1/4W 680
R332	ERDS2TJ103T	1/4W 10K
R333	ERDS2TJ821T	1/4W 820
R334	ERDS2TJ101T	1/4W 100
R335	ERDS2TJ472T	1/4W 4.7K
R336	ERDS2TJ103T	1/4W 10K
R337	ERDS2TJ472T	1/4W 4.7K
R338	ERDS2TJ3R3T	1/4W 3.3 ⚠
R339	ERDS2TJ101T	1/4W 100
R340	ERDS2TJ392T	1/4W 3.9K
R341	ERDS2TJ332T	1/4W 3.3K
R342	ERDS2TJ682T	1/4W 6.8K
R343	ERDS2TJ395T	1/4W 3.9M
R348	ERDS2TJ103T	1/4W 10K
R349	ERDS2TJ472T	1/4W 4.7K
R350	ERDS2TJ103T	1/4W 10K
R351	ERDS2TJ391T	1/4W 390
R352	ERDS2TJ102T	1/4W 1K
R353	ERDS2TJ391T	1/4W 390
R354	ERDS2TJ103T	1/4W 10K
R355	ERDS2TJ102T	1/4W 1K
R356	ERDS2TJ332T	1/4W 3.3K
R357	ERDS2TJ103T	1/4W 10K
R358	ERDS2TJ223T	1/4W 22K
R359	ERDS2TJ103T	1/4W 10K
R360, 361	ERDS2TJ1R5T	1/4W 1.5
R362	ERDS2TJ103T	1/4W 10K
R363	ERDS2TJ104T	1/4W 100K
R364	ERDS2TJ473T	1/4W 47K
R365	ERDS2TJ103T	1/4W 10K
R366	ERDS2TJ682T	1/4W 6.8K
R367	ERDS2TJ223T	1/4W 22K
R368, 369	ERDS2TJ102T	1/4W 1K
R370, 371	ERDS2TJ103T	1/4W 10K
R372	ERDS2TJ153T	1/4W 15K
R401	ERDS2TJ472T	1/4W 4.7K
R402, 403	ERDS2TJ181T	1/4W 180
R404	ERDS2TJ471T	1/4W 470
R501	ERDS2TJ221T	1/4W 220
R551	ERDS2TJ472T	1/4W 4.7K
R552, 553	ERDS2TJ104T	1/4W 100K
R554	ERDS2TJ472T	1/4W 4.7K
R555	ERDS2TJ103T	1/4W 10K
R556	ERDS2TJ182T	1/4W 1.8K

Ref. No.	Part No.	Values & Remarks
R557	ERDS2TJ103T	1/4W 10K
R558	ERDS2TJ182T	1/4W 1.8K
R559	ERDS2TJ102T	1/4W 1K
R562	ERDS2TJ392T	1/4W 3.9K
R600	ERDS2TJ151T	1/4W 150 (E)
R601	ERDS2TJ101T	1/4W 100 (E)
R801-806	ERDS2TJ103T	1/4W 10K
R807	ERDS2TJ223T	1/4W 22K
R808-810	ERDS2TJ104T	1/4W 100K
R811-815	ERDS2TJ103T	1/4W 10K
R816	ERDS2TJ124T	1/4W 120K
R817	ERDS2TJ106T	1/4W 10M
R818	ERDS2TJ334T	1/4W 330K
R819	ERDS2TJ105T	1/4W 1M
R820	ERDS2TJ101T	1/4W 100
R821	ERDS2TJ472T	1/4W 4.7K
R823, 824	ERDS2TJ472T	1/4W 4.7K
R825	ERDS2TJ104T	1/4W 100K
R826-829	ERDS2TJ102T	1/4W 1K
R830	ERDS2TJ562T	1/4W 5.6K
R831	ERDS2TJ104T	1/4W 100K
R832	ERDS2TJ474T	1/4W 470K
R833	ERDS2TJ103T	1/4W 10K
R834-838	ERDS2TJ474T	1/4W 470K
R839-844	ERDS2TJ103T	1/4W 10K
R845	ERDS2TJ681T	1/4W 680
R846-848	ERDS2TJ472T	1/4W 4.7K
R849	ERDS2TJ474T	1/4W 470K
R850	ERDS2TJ103T	1/4W 10K
R851	ERDS2TJ393T	1/4W 39K
R852	ERDS2TJ473T	1/4W 47K
R853	ERDS2TJ103T	1/4W 10K
R854	ERDS2TJ474T	1/4W 470K
R855	ERDS2TJ103T	1/4W 10K
R856	ERDS2TJ473T	1/4W 47K
R857	ERDS2TJ562T	1/4W 5.6K
R858	ERDS2TJ103T	1/4W 10K
R860	ERDS2TJ151T	1/4W 150
R863, 864	ERDS2TJ104T	1/4W 100K
R866	ERDS2TJ221T	1/4W 220
R867	ERDS2TJ220T	1/4W 22
R868-870	ERDS2TJ104T	1/4W 100K
		CAPACITORS
C1	RCBS1H331KBY	50V 330P
C2	RCBS1H102KBY	50V 1000P
C3	RCBS1H4R7KCY	50V 4.7P
C4	RCBS1H100JCY	50V 10P
C5	RCBS1H330JLY	50V 33P
C6	RCBS1C103MYY	16V 0.01U
C7	RCBS1H102KBY	50V 1000P

Ref. No.	Part No.	Values & Remarks
C8	RCBS1H3R3KCY	50V 3.3P
C9-12	RCBS1H102KBY	50V 1000P
C13	RCBS1H100JCY	50V 10P
C14	RCBS1H181KBY	50V 180P
C15	RCBS1C103MYY	16V 0.01U
C16	ECEA1HU2R2B	50V 2.2U
C17, 18	ECFT1C223MDY	16V 0.022U
C20	ECFT1C223MDY	16V 0.022U
C21	RCBS1H331KBY	50V 330P
C22	RCBS1C103MYY	16V 0.01U
C23	ECEA0JU101B	6.3V 100U
C24, 25	ECFT1C223MDY	16V 0.022U
C26	ECEA1CU100B	16V 10U
C27	ECFR1C473MR	16V 0.047U
C28	RCBS1C103MYY	16V 0.01U
C29	RCBS1H102KBY	50V 1000P
C30	RCBS1C103MYY	16V 0.01U
C32	RCBS1C103MYY	16V 0.01U
C33	RCBS1H470JLY	50V 47P
C35	ECQP2A391GZT	100V 390P
C36	ECQP2A181JZT	100V 180P
C37	ECQP2A121JZT	100V 120P
C38, 39	ECFT1C223MDY	16V 0.022U
C40	RCBS1H121KBY	50V 120P
C41, 42	RCBS1C103MYY	16V 0.01U
C43	ECEA1AU101B	10V 100U
C44	ECEA1HU2R2B	50V 2.2U
C45, 46	RCBS1C103MYY	16V 0.01U
C47	RCBS1H102KBY	50V 1000P
C48	RCBS1C103MYY	16V 0.01U
C49, 50	ECEA1HUR47B	50V 0.47U
C51	ECEA1HU010B	50V 1U
C52	ECQP1102JZT	100V 1000P
C53	RCBS1H102KBY	50V 1000P
C54	ECEA1HNR47SB	50V 0.47U
C55	RCBS1C103MYY	16V 0.01U
C56	RCBS0J223NYY	50V 0.022U
C57	ECQP1103JZ	100V 0.01U
C58	ECFR1C473MR	16V 0.047U
C59	ECEA1CU101B	16V 100U
C60	ECFT1C223MDY	16V 0.022U
C61	ECEA1HU010B	50V 1U
C62	RCBS1C103MYY	16V 0.01U
C63	RCBS1H270JLY	50V 27P
C64	ECEA1AU470B	10V 47U
C65	ECFT1C223MDY	16V 0.022U
C66	RCBS1H471KBY	50V 470P
C67, 68	RCBS1H150JCY	50V 15P
C69	ECEA1HU3R3B	50V 3.3U
C70, 71	RCBS1H102KBY	50V 1000P
C72	RCBS1H331KBY	50V 330P
C73	ECEA1HU010B	50V 1U

Ref. No.	Part No.	Values & Remarks
C74	RCBS1H331KBY	50V 330P
C75	ECEA1HU2R2B	50V 2.2U
C76	RCBS1H8R2KCY	50V 8.2P
C77	RCBS1H181KBY	50V 180P
C78	RCBS1H2R7KCY	50V 2.7P
C79	RCBS1H010MCY	50V 1P
C80	RCBS1H331KBY	50V 330P
C81	RCBS1H101KBY	50V 100P
C82	RCBS1H331KBY	50V 330P
C93	ECFT1C223MDY	16V 0.022U
C94	RCBS1H331KBY	50V 330P
C98	RCBS1H102KBY	50V 1000P
C99	RCBS1H331KBY	50V 330P
C100	RCBS1H331KBY	50V 330P
C101	ECEA50M1RB	50V 1U
C101A	RCBS1H331KBY	50V 330P
C102	RCBS1H101KBY	50V 100P
C102A	RCBS1H102KBY	50V 1000P
C103	RCBS1H471KBY	50V 470P
C104	ECEA0JU101B	6.3V 100U
C105	ECFT1C333KDY	16V 0.033U
C106	ECEA1HU010B	50V 1U
C111, 112	RCBS1H102KBY	50V 1000P
C113	ECFT1C223KDY	16V 0.022U
C114	ECEA0JU101B	6.3V 100U
C115	ECFT1C333KDY	16V 0.033U
C116	RCBS1H330JLY	50V 33P
C117	RCBS1H102KBY	50V 1000P
C118	ECEA1HU010B	50V 1U
C122	ECEA1CU100B	16V 10U
C130	ECEA0JU332E	6.3V 3300U
C140	ECEA1AU101B	10V 100U
C141	ECEA0JU101B	6.3V 100U
C142	ECEA1HUR33B	50V 0.33U
C143	RCBS1H471KBY	50V 470P
C144	ECEA1AU222E	10V 2200U
C146	ECQV1H224JZ3	50V 0.22U
C151	ECEA1HUR47B	50V 0.47U
C152	RCBS1H471KBY	50V 470P
C153	ECEA1HU010B	50V 1U
C154	ECFT1C333KDY	16V 0.033U
C155	RCBS1H471KBY	50V 470P
C156	ECEA1CU100B	16V 10U
C157	RCBS1H102KBY	50V 1000P
C158	RCBS1C332MXY	16V 3300P
C159	ECEA1HU2R2B	50V 2.2U
C160	ECEA1HUR33B	50V 0.33U
C161	ECEA1HU0R1B	50V 0.1U
C162	ECFT1C333MDY	16V 0.033U
C163	ECEA1HU010B	50V 1U
C164	ECFT1C683KDY	16V 0.068U
C165, 166	RCBS1C103MYY	16V 0.01U

Ref. No.	Part No.	Values & Remarks
C167	ECEA1HU010B	50V 1U
C168	ECEA1HUR22B	50V 0.22U
C169	ECEA1HUR33B	50V 0.33U
C170	RCBS1C472MXY	16V 4700P
C171	ECFT1C153MDY	16V 0.015U
C172	ECFT1C333MDY	16V 0.033U
C201	ECEA50M1RB	50V 1U
C202	RCBS1H101KBY	50V 100P
C203	RCBS1H471KBY	50V 470P
C204	ECEA0JU101B	6.3V 100U
C205	ECFT1C333KDY	16V 0.033U
C206	ECEA1HU010B	50V 1U
C211, 212	RCBS1H102KBY	50V 1000P
C213	ECFT1C223KDY	16V 0.022U
C214	ECEA0JU101B	6.3V 100U
C215	ECFT1C333KDY	16V 0.033U
C216	RCBS1H330JLY	50V 33P
C217	RCBS1H102KBY	50V 1000P
C218	ECEA1HU010B	50V 1U
C222	ECEA1CU100B	16V 10U
C230	ECEA0JU332E	16V 3300U
C240	ECEA1AU101B	10V 100U
C241	ECEA0JU101B	6.3V 100U
C242	ECEA1HUR33B	50V 0.33U
C243	RCBS1H471KBY	50V 470P
C244	ECEA1AU222E	10V 2200U
C246	ECQV1H224JZ3	50V 0.22U
C251	ECEA1HUR47B	50V 0.47U
C252	RCBS1H471KBY	50V 470P
C253	ECEA1HU010B	50V 1U
C254	ECFT1C333KDY	16V 0.033U
C255	RCBS1H471KBY	50V 470P
C256	ECEA1CU100B	16V 10U
C257	RCBS1H102KBY	50V 1000P
C258	RCBS1C332MXY	16V 3300P
C259	ECEA1HU2R2B	50V 2.2U
C260	ECEA1HUR33B	50V 0.33U
C261	ECEA1HU0R1B	50V 0.1U
C262	ECFT1C333MDY	16V 0.033U
C263	ECEA1HU010B	50V 1U
C264	ECFT1C683KDY	16V 0.068U
C265, 266	RCBS1C103MYY	16V 0.01U
C267	ECEA1HU010B	50V 1U
C268	ECEA1HUR22B	50V 0.22U
C269	ECEA1HUR33B	50V 0.33U
C270	RCBS1C472MXY	16V 4700P
C271	ECFT1C153MDY	16V 0.015U
C272	ECFT1C333MDY	16V 0.033U
C301	ECEA1HU010B	50V 1U
C302	RCBS1H102KBY	50V 1000P
C303	ECEA1HU010B	50V 1U
C304	RCBS1H102KBY	50V 1000P

Ref. No.	Part No.	Values & Remarks
C305	ECEA1AU470B	10V 47U
C306	ECEA1HU2R2B	50V 2.2U
C307	ECEA1CU100B	16V 10U
C308	ECEA0JU101B	6.3V 100U
C309	ECEA1AU221B	10V 220U
C311	ECQP1272JZT	50V 2700P
C312	RCBS1C103MYY	16V 0.01U
C313	ECQP1123JZT	100V 0.012U
C314	RCBS1C103MYY	16V 0.01U
C315	ECQV1H474JZ3	50V 0.47U
C316	ECQP1223JZ	100V 0.022U
C317	ECEA1AU221B	10V 220U
C318	ECEA1HU010B	50V 1U
C319	RCBS1C332MXY	16V 3300P
C320	ECFR1C473MR	16V 0.047U
C321	ECEA1CU101B	16V 100U
C323	ECEA1AU221B	10V 220U
C324	ECQP1822JZ	100V 8200P
C325	ECFT1C104MDY	16V 0.1U
C326	RCBS1C103MYY	16V 0.01U
C327	ECEA1HU2R2B	50V 2.2U
C328	ECEA1CU100B	16V 10U
C329	ECEA1AU330B	10V 33U
C330	ECEA1EU221B	25V 220U
C331	ECEA1AU471B	10V 470U
C332	ECFT1C104MDY	16V 0.1U
C333	RCBS1H471KBY	50V 470P
C334	ECEA1CU100B	16V 10U
C335, 336	ECEA1EU222	25V 2200U
C337	ECEA1AU101B	10V 100U
C339	ECEA1AU101B	10V 100U
C340	ECEA1AU470B	10V 47U
C342	RCBS1H471KBY	50V 470P
C343	ECEA1AU101B	10V 100U
C344-347	RCBS1C103MYY	16V 0.01U
C351-354	ECQV1H224JZ3	50V 0.22U
C360-362	RCBS1H331KBY	50V 330P
C370	ECEA1EU4R7B	25V 4.7U
C371, 372	ECEA1CU100B	16V 10U
C373	ECEA1AU101B	10V 100U
C401, 402	ECEA1HK010B	50V 1U
C501	ECEA1AU471B	10V 470U
C551, 552	ECEA1AU221B	10V 220U
C553	RCBS1H102KBY	50V 1000P
C554	ECEA1EU4R7B	25V 4.7U
C555	ECEA1HU2R2B	50V 2.2U
C556	RCBS1H102KBY	50V 1000P
C600	RCBS1H102KBY	50V 1000P (E)
C801-804	RCBS1H331KBY	50V 330P
C805, 806	RCBS1C103MYY	16V 0.01U
C807	ECEA0JU101E	6.3V 100U
C808, 809	RCBS1H102KBY	50V 1000P

Ref. No.	Part No.	Values & Remarks
C810	ECEA0JU221E	6.3V 220U
C811	ECEA1CK100B	16V 10U
C812, 813	RCBS1H220JCY	50V 22P
C814	RCBS1H101KBY	50V 100P
C815	RCBS1H102KBY	50V 1000P
C816	RCBS1H331KBY	50V 330P
C817	RCBS1H151KBY	50V 150P
C818, 819	RCBS1H331KBY	50V 330P
C820, 821	RCBS1C103MYY	16V 0.01U
C822	ECEA0JK101B	6.3V 100U
C825-831	RCBS1H331KBY	50V 330P
C832	RCBS1H180JCY	50V 18P
C833-836	RCBS1H331KBY	50V 330P
C837	RCBS1C103MYY	16V 0.01U
C838	RCBS1H331KBY	50V 330P
C839	RCBS1H180JCY	50V 18P
C971	ECBT1H101KB5	50V 100P

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